

Problem Determination Guide and Reference

Communications Family

IBM

Problem Determination Guide and Reference

Communications Family



First Edition (April 1987)

References in this publication to IBM products, programs, or services do not imply that IBM intends to make them available in all countries in which IBM operates. Any reference to an IBM program product in this publication is not intended to state or imply that only IBM's program product may be used. Any functionally equivalent program may be used instead.

Publications are not stocked at the address given below. Requests for this or other IBM publications should be made directly to the IBM branch office serving your locality.

A Reader's Comment Form is provided at the back of this publication. If the form has been removed, address comments to IBM Corporation, Department, 95H/998 11400 Burnet Road, Austin, TX 78758. IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you.

Preface

This reference guide explains how to solve software problems you may encounter using the IBM 3270 Workstation Program, also referred to in this book as the *workstation program*. It includes explanations of problem determination procedures, messages, and return codes and also provides instructions for using patches. If you have an obvious hardware problem, refer to the problem determination section in the *Guide to Operations* manual.

How This Manual Is Organized

This manual is divided into five chapters:

- Chapter 1 Starting Out
- Chapter 2 Problem Determination Procedures
- Chapter 3 Messages
- Chapter 4 Return Codes
- Chapter 5 Creating, Installing, and Removing Patches

Chapter 1. Starting Out

This chapter contains a basic checklist that will help you solve your problem directly or refer you to more detailed problem-solving procedures. It also includes instructions for using the Trace command and the dump data utilities.

Chapter 2. Problem Determination Procedures

This chapter contains information that will help you isolate and solve problems that are *not* indicated by a message or return code.

Chapter 3. Messages

This chapter lists messages that may appear on your screen, explains the problem and indicates the proper user response.

Chapter 4. Return Codes

This chapter explains return codes you may encounter within messages and provides the correct user response.

Chapter 5. Installing and Removing Patches

This chapter explains how to use patches to make changes in the workstation program. The program runs on DOS and is invoked in a personal computer session.

This manual also contains:

An **Index**, which contains entries and cross-referenced terms to help you find information.

Related Publications

The following books are related to the IBM 3270 Workstation Program and its prerequisite hardware and software:

- *Guide to Operations*

The *Guide to Operations* shipped with your system unit contains information about your work station hardware. It tells you how to set up and use the hardware, as well as diagnose hardware problems.

- *3270 Personal Computer Hardware Introduction and Preinstallation Planning*

This book contains information to help evaluate and plan for 3270 PC hardware requirements at your site. For example, it lists the

physical dimensions and electrical requirements for all 3270 PC hardware models. Contact your local IBM sales representative for information on how to obtain copies of this book.

- The following items are shipped with this book and the workstation program diskettes:

- *3270 Workstation Program User's Guide and Reference*

This book contains information about setting up and using the workstation program.

- 3270 Workstation Program Keyboard Quick Reference

These cards are keyboard-specific synopses of information from the *User's Guide and Reference*. You can use the one that relates to your keyboard for quick reference. There are three cards in the workstation program package:

- 3270 PC keyboard
 - Enhanced PC keyboard
 - AT® and XT keyboard

- 3270 Workstation Program Keyboard Templates

The keyboard templates provided in the package assist you in using the workstation program functions on your particular keyboard. There are three templates in the package:

- Enhanced PC keyboard template
 - AT keyboard template
 - XT keyboard template

- Online tutorial diskette (*Helper*)

This diskette contains introductory information and practice exercises to help in learning to use the workstation program.

- Customization worksheet

This foldout card helps you to plan for your options before customizing the workstation program.

- *3270 Workstation Program Programming Guide*

This book explains how to write application programs in Assembler language that use the functions provided with the workstation program.

- *3270 PC High Level Language Application Programming Interface (HLLAPI)⁰⁰*

The diskette and book that comes in this package make it possible for you to write application programs in high-level languages such as Basic, Pascal, or Cobol to use the functions provided with the workstation program.

- *The IBM Programmer's Guide to the Server-Requester Programming Interface for the IBM Personal Computer and the IBM 3270 PC¹*

This book explains how to write PC applications that request services from an application at an IBM System/370 type host system. In this relationship, the PC application is called the requester, and the host application is called the server. This book also contains the return codes that are generated at the work station if problems occur in transmitting requests or replies.

Contents

Chapter 1. Starting Out	1-1
Preliminary Checklist	1-3
The Trace Command	1-5
Dump Data Utilities	1-7
Chapter 2. Problem Determination Procedures	2-1
Introduction	2-2
Autokey Problem Determination: Record	2-4
Autokey Problem Determination: Play	2-11
Autokey Problem Determination: Erase	2-17
Host Communication Problem Determination	2-21
Display Dump Problem Determination	2-33
Document Distribution File Transfer Problem Determination	2-34
Dump Diskette Preparation Problem Determination	2-40
File Transfer Problem Determination	2-42
Keyboard Problem Determination	2-48
Patch Problem Determination	2-53
Personal Computer Application/Workstation Program Problem Determination	2-56
Printer Problem Determination	2-58
Save and Restore Problem Determination	2-61
System Error Problem Determination	2-62
System Startup Problem Determination	2-63
Trace Problem Determination	2-66
Work Station Control Problem Determination	2-67
PD Error Steps	2-69
Chapter 3. Messages	3-1
Introduction	3-2
INDCU Customization Messages	3-3
INDD Display Dump Messages	3-18
INDDE Display Environment Messages	3-20
INDDP Dump Diskette Preparation Messages	3-22
INDEM Keystroke Emulation Messages	3-25
INDFT File Transfer Messages	3-26
INDID Interchange Document Profile Messages	3-37

Contents

INDKD Keyboard Definition Utility Messages	3-39
INDPA Patch Installation Messages	3-45
INDSM Split/Merge Messages	3-54
INDSP System/Program Information File Messages	3-60
INDSR Save/Restore Messages	3-64
INDST Startup Messages	3-73
INDSY System Error Messages	3-76
INDTR Trace Messages	3-86
INDWS Work Station Control Messages	3-88
INDXF Document Distribution File Transfer Messages	3-101
Message Error Steps	3-111
Chapter 4. Return Codes	4-1
Introduction	4-2
Function ID X'12': System Services Return Codes	4-4
Function ID X'13': Environment Manager Services Return Codes	4-15
Function ID X'22' or X'23': DOS Subsystem Services Return Codes	4-23
Function IDs X'24' or X'25': System Loader Return Codes	4-31
Function ID X'30': DFT Operations Return Codes	4-37
Function ID X'32': Host Interactive Services Return Codes	4-46
Function ID X'46': CUT Return Codes	4-48
Function ID X'51': Notepad Operations Return Codes	4-50
Function ID X'62': Keyboard Services Return Codes	4-52
Function ID X'63': Window Management Services Return Codes	4-55
Function ID X'64': Copy Services Return Codes	4-59
Function ID X'67': Draw Service Return Codes	4-62
Function ID X'69': Presentation Space Services Return Codes ..	4-63
Function ID X'6B': Session Information Services Return Codes	4-66
Function ID X'6C': Translate Services Return Codes	4-69
Function ID X'6D': OIA Services Return Codes	4-70
Function ID X'6E': 3270 Keystroke Emulation Services Return Codes	4-71
Function ID X'6F': Keystroke Definition Return Codes	4-72
Function ID X'72': Error Handler Return Codes	4-73
Function ID X'7F': Dump Task Return Codes	4-74
Function ID X'81': Enhanced Connectivity Router Return Codes	4-75
Function IDs X'Dx through Fx': User System Extension Return Codes	4-76
Return Code Error Steps	4-77

Contents

Chapter 5. Creating, Installing, and Removing Patches	5-1
Introduction	5-2
Describing the Patch Format	5-3
Creating a Patch File	5-5
Installing a Patch	5-9
Listing the Current System Level and Currently Installed APARs	5-11
Removing a Patch	5-12
Index	X-1

}

Chapter 1. Starting Out

Preliminary Checklist	1-3
The Trace Command	1-5
Dump Data Utilities	1-7
Preparing Formatted Dump Diskettes	1-7
Taking the Dump	1-9
Using the Display Utility	1-10
Displaying the Dump	1-11
Displaying the Error Counters	1-13
Displaying the Trace Buffer	1-13

Starting Out

This chapter contains information and instructions for solving problems you may encounter using the IBM 3270 Workstation Program. You should start with the preliminary checklist that follows. The steps in this checklist will either solve your problem directly or send you to an alternative problem-solving procedure.

If after going through the appropriate procedures in this book, your problem is still not resolved, you will be directed to collect specific data about the problem and follow the procedures employed at your location for isolating and reporting your problem. To collect this information, it is often necessary to use the Trace command and/or the dump data utilities. These functions are explained in this chapter.

It may turn out that your problem is a duplicate of an existing problem. In this case, the IBM Support Center may ask you to accept and apply a "patch" to the workstation program. Chapter 5 describes how to do this.

If your problem is a new one, however, you will be asked to provide further information, so that a solution can be found, tested, and distributed to other users. A problem treated in this way is called an Authorized Problem Analysis Report (APAR).

Preliminary Checklist

Use the preliminary checklist below to start the problem determination process.

Note: "Local Procedures," to which you are often referred during the problem determination procedure, are the procedures followed in your location for isolating and reporting problems or making repairs.

1. **Check your work station hardware and be sure it is connected and switched on.** If an item of hardware does not come on line after you have switched it on, or you receive a Power-On Self Test (POST) error message, refer to the *Guide to Operations* manual.

Also refer to this manual if you experience any other obvious hardware problem. This may be indicated by the fact that:

- The operation previously worked, and nothing has been changed on your system.
 - The operation does not fail on another work station.
2. **Are you using the correct system diskettes for the work station?**
 3. **If you have received any IBM 3270 Workstation Program messages (INDCUnnn, INDDDnnn, INDDEnnn, INDPnnn, INDEMnnn, INDFTnnn, INDKDnnn, INDPAnnn, INDSMnnn, INDSPnnn, INDSRnnn, INDSTnnn, INDSYnnn, INDTRnnn, INDWSnnn, INDXFnnn), refer to Chapter 3, "Messages" on page 3-1.**
 4. **If you have received any return codes within messages, refer to Chapter 4, "Return Codes" on page 4-1.**
 5. **Do you have a problem with notepad?**

Follow your local procedures and have available the data requested in PD Error Steps 1, 4, and 11 on page 2-69.

6. **If your problem has not been addressed thus far, refer to the following table.**

Preliminary Checklist

If You Have a Problem With:	Refer to:
Autokey	"Autokey Problem Determination" beginning on page 2-4.
Displaying a dump	"Display Dump Problem Determination" on page 2-33.
Document distribution file transfer (TRANSFER)	"Document Distribution File Transfer Problem Determination" on page 2-34.
Preparing dump diskettes	"Dump Diskette Preparation Problem Determination" on page 2-40.
File transfer	"File Transfer Problem Determination" on page 2-42.
Your hardware	The hardware information in the <i>Guide to Operations</i> .
A host session or window	"Host Communication Problem Determination" on page 2-21.
The keyboard	"Keyboard Problem Determination" on page 2-48.
Patch	"Patch Problem Determination" on page 2-53.
A personal computer session or window	"Personal Computer Application/Workstation Program Problem Determination" on page 2-56.
A printer	"Printer Problem Determination" on page 2-58.
Program errors	"Host Communication Problem Determination" on page 2-21.
Save/Restore	"Save and Restore Problem Determination" on page 2-61.
System errors	"System Error Problem Determination" on page 2-62.
System startup	"System Startup Problem Determination" on page 2-63.

If You Have a Problem With:	Refer to:
Trace	"Trace Problem Determination" on page 2-66.
Work station control	"Work Station Control Problem Determination" on page 2-67.

If your problem has not been referred to in the preceding checklist, follow your local procedures and have available data from "PD Error Steps" 1 and 4 on page 2-69.

The Trace Command

This section describes how to use the Trace command to collect data about software problems you may have encountered. The Trace command runs as a personal computer application and is used to turn Trace on and off. If you encounter problems running Trace itself, refer to "Trace Problem Determination" in this chapter.

While running in IBM Personal Computer DOS application mode with the personal computer window active, the operator issues a TRACE ON command for the trace recordings needed to start or a TRACE OFF command to stop all trace recordings. The traces in effect are those specified on the most recent TRACE ON command.

This chapter identifies which events you must turn on to get the correct documentation for a given problem.

The syntax of the command is:

TRACE { ON M [,n] ... [,o] [,p] }
 M [n] [-n] [o] [-o] [p] [-p] }
 OFF [/d] }

- The Trace commands may be typed and entered in any combination of uppercase and lowercase characters.
- **TRACE OFF /d** turns off all trace requests and causes the error handler to take a dump.
- One of each of the parameters shown in uppercase in a stack must be selected.
- Lowercase parameters are optional.
- When a sequence of trace events are to be turned on, a hyphen may be used between the lower and upper limits to signify the sequence.

- **M, n, o, and p** represent decimal numbers corresponding to unique trace identification recording requests.
- Single or multiple blanks and/or commas delineate individual requests.
- The **/d** parameter indicates that a dump is desired. When you request a dump, you will be prompted to insert formatted dump diskette(s). After the dump gets control, the workstation program is no longer running. More information concerning dumps is provided in the next section.

Dump Data Utilities

The dump data utilities prepare formatted dump diskettes, take a dump, and then display dumps of:

- Memory
- The trace buffer
- Error counters.

The three basic steps you follow to use these utilities are:

1. Preparing formatted dump diskettes
2. Taking the dump
3. Displaying the dump.

Preparing Formatted Dump Diskettes

To use the dump facility you must start by preparing a formatted dump diskette(s). To do this, perform the following steps:

1. IPL DOS and have the diskette available that contains the INDPREP utility.
2. Format and externally label the number of diskettes according to the chart below.

Remember:

- The diskettes cannot contain any bad sectors.
- Do **NOT** use /s as a FORMAT command parameter.

Type of Diskette	Number of Diskettes Needed	Externally Label the Diskette(s):
5 1/2" 360 KB	3	DUMPDATA.001 DUMPDATA.002 DUMPDATA.003
3 1/2" 720 KB	2	DUMPDATA.001 DUMPDATA.002
High Density 1.2 MB or greater	1	DUMPDATA.001

With the DOS diskette in the active drive, type:

format a:

or:

format b:

Note: Refer to the DOS manual to ensure that you are using the correct parameters for the FORMAT command (for example, /4 to format a 360K double-sided diskette in a high capacity drive).

- After formatting the recommended number of diskettes, insert the diskette containing the INDPREP utility into the active diskette drive and type:

INDPREP a:

or:

INDPREP b:

- Press Enter.

- You will be prompted to insert the diskette(s) just formatted.

At the conclusion of the INDPREP utility, the following message appears:

INDDP003 Dump diskette(s) ready for use

You have generated the dump diskette(s) to use only when you need to take a dump.

Taking the Dump

Notes:

1. If you have an XMA (expanded memory adapter) installed, it may take up to six minutes to complete the dumping process.
2. If you used the IBM 3270 Workstation Program Keyboard Definition Utility to redefine the keyboard layout, when you are prompted to "Press D to take a dump..." you must press the "original" D key to take the dump.

If you need to use the dump facility for problem determination procedures, you may take a dump in one of four ways:

1. By pressing the **D** key in response to an INDSY001 or INDSY002 message.
2. By pressing the Alt + Ctrl + Test keys (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT® keyboard). The following prompt message will appear:

INDSY001 Unrecoverable System Error - 72060000
Press D to take a dump or any other key to re-IPL

3. By turning TRACE off with the dump option. To do this, type: TRACE OFF/D. The following prompt message will appear:

INDSY002 Component Error - 72040000 Press D to take a dump or any other key to continue

4. By pressing the Non-Maskable Interrupt (NMI) button, if present, on the back of the system unit. Use the NMI button if the keyboard does not respond. The following prompt message will appear:

INDSY001 Unrecoverable System Error - 72050000
Press D to take a dump or any other key to re-IPL

After pressing the **D** key in response to one of the above system messages:

1. You will be prompted to insert diskette DUMPDATA.001.
2. The message INDSY011 Dumping ... will appear.
3. You will then be prompted to insert DUMPDATA.002 and DUMPDATA.003 diskettes if they were created. Insert them as requested.
4. When the dump is completed, messages INDSY011 and INDSY012 appear. Insert the system diskette and press any key to re-IPL.

This completes the dump process.

Using the Display Utility

The display utility, INDDISP, resides on your customized utilities system diskette, and is used to display dumps of memory, trace buffers, and error counters. Note that to use the display utility, you must have previously taken a dump or issued the command INDSAVE, discussed below.

To save dumps of trace buffers or error counters:

1. You must be in an active personal computer session.
2. At the DOS prompt, type:

INDSAVE TRACE

or:

INDSAVE COUNTER

This action creates TRACE.DMP or COUNTER.DMP files on the diskette in the active drive, depending on the parameter you choose. This is a quick way to provide trace or error counter information without dumping the entire system.

Dump Data Utilities

Displaying the Dump

To display dumps of memory, trace buffers, or error counters:

1. You must be in an active personal computer session.
2. At the DOS prompt, type:

INDDISP a:DUMP

or

INDDISP b:DUMP

3. Press Enter.
4. The following message appears:

INDDDD004 Insert DUMPDATA.001. Press Enter, or
End to quit

5. Insert DUMPDATA.001 in the currently active drive you specified above and press Enter.
6. Notice the display of the dump. It always begins at address 0000:0000.

You can use the following keys:

Home Takes you to another panel with additional options

PgUp Takes you to the next higher 256 bytes of memory

PgDn Takes you to the next lower 256 bytes of memory

End Ends the use of this display utility

7. If you press the Home key, a panel appears with prompts that allow you to display the following options:
 - a. Trace buffer.
 - b. Registers at the time of the dump. If the registers are all zeros, they were not meaningful at the time of the dump.
 - c. Error counters.
 - d. PC Presentation Space Work Areas.

- e. PC Presentation Space Buffers.
- f. Segment address in hexadecimal. Type the first four digits of the 8-character address and press Enter. The following prompt appears:
Enter offset to display
Type the last four digits that follow the colon. Then that section of memory is displayed.
- g. The following frequently used buffers may be found at the indicated segment addresses listed below.

Buffer You Want Displayed	Type of PC You Have	Segment Address
DFT/CUT communications buffers	3270 PC unique hardware or Non-3270 PC hardware	CE00
PC display buffer	3270 PC unique hardware or Non-3270 PC Mono Display hardware	B000
	Non-3270 PC Color Display hardware	B800* or A000**
PC graphics buffer	3270 PC unique hardware	B800
	Non 3270 PC hardware	B800* or A000**
3270 display buffer	3270 PC unique hardware	A000
	Non 3270 PC hardware	Not applicable
* BIOS Modes 0 through 6		
** BIOS Modes D, E, 10, 11, and 13		
As described in the "IBM Enhanced Graphics Adapter" section of the <i>Technical Reference Options and Adapter</i> manual.		

Dump Data Utilities

Displaying the Error Counters

To display the counters:

1. You must be in an active personal computer session.
2. At the DOS prompt, type:

INDDISP COUNTER

3. Press Enter.

4. The following message appears:

INDDDO06 Insert diskette with COUNTER.DMP. Press Enter, or End to quit

5. Insert diskette with file COUNTER.DMP in the currently active drive, and press Enter.

6. You will see a display of the counters where:

RC = Return code.

TH = Threshold or the point at which the error-handling program takes action.

CT = Count or the number of times this error has been reported to the error-handling program.

SV = Severity level of error: 1, 2, 3....

Displaying the Trace Buffer

To display the trace buffer:

1. You must be in an active personal computer session.
2. At the DOS prompt, type:

INDDISP TRACE

3. Press Enter. The following message appears:

INDDD005 Insert diskette with TRACE.DMP. Press Enter, or End to quit

4. Insert the diskette with file TRACE.DMP in the currently active drive, and press Enter.
5. You will see a display of the trace buffers.

Chapter 2. Problem Determination Procedures

Introduction	2-2
Autokey Problem Determination: Record	2-4
Autokey Problem Determination: Play	2-11
Autokey Problem Determination: Erase	2-17
Host Communication Problem Determination	2-21
Host Communication Indicators	2-21
Program Error Codes	2-27
Display Dump Problem Determination	2-33
Document Distribution File Transfer Problem Determination	2-34
Dump Diskette Preparation Problem Determination	2-40
File Transfer Problem Determination	2-42
Keyboard Problem Determination	2-48
Patch Problem Determination	2-53
Personal Computer Application/Workstation Program Problem Determination	2-56
Printer Problem Determination	2-58
Save and Restore Problem Determination	2-61
System Error Problem Determination	2-62
System Startup Problem Determination	2-63
Trace Problem Determination	2-66
Work Station Control Problem Determination	2-67
PD Error Steps	2-69

Introduction

This chapter contains information that will help you isolate and solve software problems that are *not* indicated by a message or return code. Follow the question steps in the section you are using sequentially unless you are directed to branch to another step. If you receive a message or return code, refer to the appropriate chapter in this manual. If there is an obvious or apparent hardware problem, refer to the *Guide to Operations* manual. This chapter contains information to help you isolate problems concerning:

- Autokey
 - Record
 - Play
 - Erase
- Communication
- Display dump
- Document distribution file transfer
- Dump diskette preparation
- File transfer
- Keyboard
- Notepad
- Patch
- Personal computer applications under the workstation program
- Printer
- Save and restore
- System error
- System startup
- Trace

- Work station control mode
 - Browse
 - Copy
 - Help
 - List
 - Setup.

Note: “Local procedures,” to which you are frequently referred during this chapter, are the procedures followed in your location for isolating problems or making repairs.

Autokey Problem Determination: Record

1 Do you have a PC XT or AT keyboard?

YES The autokey function is not available with an XT or AT keyboard.

NO Go to question 2.

2 Does the operator information area indicate WSCTRL?

YES Go to question 4.

NO Press the WSCtrl key (Shift + Esc on the Enhanced PC keyboard). Then go to question 3.

3 Does the operator information area indicate WSCTRL?

YES Go to question 4.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

4 Does the operator information area indicate autokey?

YES Go to question 6 on page 2-5.

NO Make sure you are in lower case. Press the Auto Key (Left Alt + F5 on the Enhanced PC keyboard). Then go to question 5.

5 Does the operator information area indicate autokey?

YES Go to question 6 on page 2-5.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

6 Is the problem with recording?

YES Go to question 7.

NO Refer to "Autokey Problem Determination: Play" on page 2-11 or "Autokey Problem Determination: Erase" on page 2-17 in this chapter.

7 Does the operator information area indicate Record?

YES Go to question 9.

NO Press the Record key, then go to question 8.

8 Does the operator information area indicate record?

YES Go to question 9.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

9 Is there an error message in the operator information area?

YES Go to question 10.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

10 Is there space remaining in the message recording space?

YES Press PF1 (List), then go to question 11.

NO Go to question 12 on page 2-6.

11 Is free space in the autokey recording area less than 14?

YES The space is full. You must delete a recording if you want to make room for a new one.

NO The recording area has been damaged. Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

Autokey PD: Record

12 Does the message indicate you cannot record because another recording is in progress?

- YES** Select Screen Profile 0 and jump to each window while looking for a recording indication in the operator information area. Then go to question 13.
- NO** Go to question 14.

13 Did you find the recording indicator?

- YES** Only one recording can be active at one time. Finish the first before trying to start another.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

14 Is there a message on the screen that indicates you cannot record because the window is currently busy?

- YES** Wait until the window is no longer busy and retry the operation.
- NO** Go to question 15.

15 Is there a message on the screen that indicates "Cannot play or record: input not allowed In this window?"

- YES** The selected window cannot accept keystrokes for one of these reasons:
- It was not properly customized
 - The control unit connection is not complete
 - The application was not defined to accept keystrokes.

Select another window or fix the cause of one of the above problems and continue your work.

- NO** Go to question 16 on page 2-7.

16 Is there a message on the screen that indicates you pressed an invalid key?

YES Go to question 17.

NO Go to question 18.

17 Does Play appear in the operator information area?

YES Play is already in progress with the active window and must be completed before a recording can be started.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

18 Are you having a problem entering the recording name?

YES Go to question 19.

NO Go to question 20.

19 Does the recording name consist of only letters and/or numbers?

YES Go to question 20.

NO Recording names must consist of letters and/or numbers. Correct and retry.

20 Does an error message appear when Enter is pressed?

YES Go to question 21.

NO Go to question 25 on page 2-8.

21 Is there a "Duplicate name entered" message on your screen?

YES Press PF1 for a list, then go to question 22 on page 2-8.

NO Go to question 23 on page 2-8.

22 Is there a name that is exactly the same?

- YES** Use a unique name or delete the old name and retry.
- NO**
- a. Copy the directory entries.
 - b. Restore the Autokey data set and retry.
 - c. If the operation still fails, follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

23 Do you get a message that says an invalid name was entered?

- YES** Go to question 24.
- NO** Go to question 25.

24 Is the operator information area input field all blanks?

- YES** Blanks are invalid. Use a valid name and retry.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

25 When Enter is pressed, does the active application regain control of the screen and keyboard, and does the operator Information area have an R, indicating recording?

- YES** Go to question 26.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

26 Are you trying to record a pause?

- YES** Go to question 27 on page 2-9.
- NO** Go to question 29 on page 2-9.

27 Does the Pause key turn the pause indicator on and off?

YES Go to question 29.

NO Go to question 28.

28 Does the operator information area state SCREEN = 0?

YES Recording space is full. Delete a recording and retry.
Then go to question 29.

NO Follow your local procedures and have available data
from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page
2-69.

29 Are you trying to end a recording?

YES Go to question 30.

NO Go to question 32.

30 Have you pressed the Finish Key (Shift + End on the Enhanced PC Keyboard)?

YES Go to question 31.

NO Press Finish to complete the recording and continue
normal operation.

31 Can you do normal typing from your keyboard?

YES Continue normal operation.

NO Follow your local procedures and have available data
from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page
2-69.

32 Are you trying to cancel a recording?

YES Go to question 33 on page 2-10.

NO Go to 36 on page 2-10.

33 Have you pressed the Quit key?

YES Go to question 34.

NO Press the Quit key, then go to question 34.

34 Did the R and the P in the operator information area disappear?

YES Go to question 35.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

35 Can you do normal typing on the keyboard?

YES Recording was canceled. Continue normal operation.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

36 Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.

Autokey Problem Determination: Play

1 Do you have a PC XT or AT keyboard?

YES The autokey function is not available with an XT or AT keyboard.

NO Go to question 2.

2 Is the problem with the Play of a recording?

YES Go to question 3.

NO Refer to "Autokey Problem Determination: Record" on page 2-4 or "Autokey Problem Determination: Erase" on page 2-17 in this chapter.

3 Does the operator information area indicate play when the Play key (F4 on the Enhanced PC Keyboard) is pressed?

YES Go to question 9 on page 2-12.

NO Go to question 4.

4 Is there an error message in the operator information area?

YES Go to question 5.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

5 Is there a message on the screen that indicates "Cannot Play or Record: Input not allowed in this window"?

YES The selected window cannot accept keystrokes because:

- It was not properly customized, or
- The control unit connection is not complete, or

Autokey PD: Play

- The application was not defined to accept key-strokes.

Select another window or fix the cause of one of the above problems and continue work.

NO Go to question 6.

6 **Does the message indicate that you cannot play a recording at this time?**

YES Wait until the window is not busy and retry the play operation.

NO Go to question 7.

7 **Is there an “incorrect key pressed” message?**

YES Go to question 8.

NO Go to question 9.

8 **Is “Record” or “Play” present in the right half of the operator information area?**

YES A recording or play session is already in progress with the active window. It must complete operation before a new play can begin. Retry after the previous operation is completed.

NO Follow your local procedures and have available data from “PD Error Steps” 1, 2a, 3, 4, 5a, and 6 on page 2-69.

9 **Are you having a problem entering the recording name?**

YES Go to question 10 on page 2-13.

NO Go to question 11 on page 2-13.

10 Does the recording name consist of letters and/or numbers?

- YES** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.
- NO** Recording names must consist of letters and/or numbers. Correct and retry.

11 Does the error message "No recording with this name exists: Press (PF1)" appear when you press the Enter key?

- YES** Go to question 12.
- NO** Go to question 17 on page 2-14.

12 Was an existing recording name entered?

- YES** Press PF1 to display the list of recordings, then go to question 13.
- NO** Go to question 14.

13 Is the name entered an exact duplicate of one of the names in List, or a unique short portion of one of the names?

- YES** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.
- NO** Correct the name and retry the operation.

14 Does the message indicate an invalid name entered?

- YES** Go to question 15 on page 2-14.
- NO** Go to question 16 on page 2-14.

15 Is the operator information area input field all blanks?

- YES** Blanks are invalid for an autokey name. Correct and retry the operation.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

16 When the Enter key is pressed, does the active application program regain control of the screen and is there a P in the operator information area?

- YES** This is normal. Continue with your work.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

17 Does the pause indicator appear in the operator information area when no Pause key was recorded either by pressing the Pause key or by pressing an attention key such as PA1, a PF key, or Enter?

- YES** The keystroke from the recording may be invalid for the current window. This condition may occur if you recorded keystrokes in one window and you attempted to play them in another window. Keystrokes might be rejected by the active application if you tried to keystroke into a protected field. Correct the condition that is causing the error and retry the operation.
- NO** Go to question 18.

18 Does the pause indicator toggle off when the Pause key is pressed?

- YES** This is normal. Continue with your work.
- NO** Go to question 19 on page 2-15.

19 Is the area you are trying to play into valid for input, that is, not a protected field?

YES Go to question 20.

NO Play can be only into areas that allow input. Correct the condition and retry the operation.

20 Have you recorded pauses that you are not getting?

YES Pauses recorded after you press an attention key such as PA1, a PF key, or Enter are ignored, since the attention key generated its own pause. Pauses recorded as the last keystroke of a recording are also ignored. This is normal operation. Continue with your work.

If this is not the case, follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

NO Go to question 21.

21 Are you trying to cancel a play session?

YES Go to question 22.

NO Go to 25 on page 2-16.

22 Are you in application mode?

YES Go to question 23.

NO Press WSCtrl (Shift + Esc on the Enhanced PC keyboard), a toggle key, to get into application mode.

23 Did the P in column 55 of the operator information area and the P, if on, in column 57 of the operator information area disappear when the Quit key was pressed?

YES Go to question 24 on page 2-16.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

Autokey PD: Play

- 24** Did normal keystroking continue and no unusual screen changes occur?
- YES** Play was canceled correctly. Continue with your work.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.
- 25** Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.

Autokey Problem Determination: Erase

1 Do you have a PC XT or AT keyboard?

YES The autokey function is not available with an XT or AT keyboard.

NO Go to question 2.

2 Is the problem with trying to erase a recording?

YES Go to question 3.

NO Refer to "Autokey Problem Determination: Record" on page 2-4 or "Autokey Problem Determination: Play" on page 2-11 in this chapter.

3 Does the operator information area indicate erase?

YES Go to question 5.

NO Press the erase input (Erlnp) key (Alt + End on the Enhanced PC keyboard).

4 Does the operator information area indicate erase?

YES Go to question 5.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

5 Is there an error message in the operator information area?

YES Go to question 6 on page 2-18.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

Autokey PD: Erase

6 Does the message indicate that you cannot erase or delete a recording, because record or play is in progress?

- YES** Select Screen Profile 0 and jump to each available window while looking for a recording or play indicator in the operator information area.
- NO** Go to question 8.

7 Did you find a recording or play indicator on?

- YES** This is normal operation. Retry the erase after the recording or play completes operation.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

8 Are you having a problem entering the recording name?

- YES** Go to question 9.
- NO** Go to question 10.

9 Is the recording name only letters or numbers?

- YES** Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.
- NO** Recording names must be only letters and/or numbers. Correct and retry.

10 Does an error message appear when the Enter key is pressed?

- YES** Go to question 11 on page 2-19.
- NO** Go to question 16 on page 2-20.

11 Was the message text “Unknown name entered”?

- YES** Display the list of recordings, then go to question 12
- NO** Go to question 13.

12 Is the name entered an exact duplicate of one of the names in the list, or a unique short portion of the names?

- YES** Follow your local procedures and have available data from “PD Error Steps” 1, 2a, 3, 4, 5a, and 6 on page 2-69.
- NO** Correct the name and retry the operation.

13 Does the message indicate an invalid name entered?

- YES** Go to question 14.
- NO** Go to question 15.

14 Is the operator Information area all blanks?

- YES** Blanks are invalid for an autokey name. Correct and retry the operation.
- NO** Follow your local procedures and have available data from “PD Error Steps” 1, 2a, 3, 4, 5a, and 6 on page 2-69.

15 When the Enter key Is pressed, do you remain in work station control mode and does the prompt line ask for the operation to be performed?

- YES** Go to question 16 on page 2-20.
- NO** Follow your local procedures and have available data from “PD Error Steps” 1, 2a, 3, 4, 5a, and 6 on page 2-69.

Autokey PD: Erase

16 Is the erased recording still available for use?

YES Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

NO Go to question 17.

17 Are you trying to cancel an erase operation?

YES Go to question 18.

NO Go to 20.

18 Did you press the Quit key before pressing Enter?

YES Go to question 19.

NO The recording has been erased. Recovery would be to restore the autokey file if the recording was saved.

19 Does the operator information area revert to the initial autokey entry?

YES The erase has been canceled. Continue with your normal work.

NO Follow your local procedures and have available data from "PD Error Steps" 1, 2a, 3, 4, 5a, and 6 on page 2-69.

20 Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.

Host Communication Problem Determination

Use the following tables to find the host communication indicator or program error code you received, then follow the recommended action or recovery procedure.

Host Communication Indicators

Match your symptom with one in the following table and take the action specified.

Symptom	Probable Cause	Action
	The control unit	The logical terminal is not customized on the control unit. Follow local procedures for reporting control unit hardware problems.
)	a. A bad connection between the control unit and the PC work station, or b. The control unit is hung or powered off, or c. The PC hardware, or d. The control unit hardware	a. Make sure the signal cable is connected. If the problem persists: b. Follow local procedures to re-IPL the control unit. If the problem persists: c. Refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC work station failures. If you did not find a problem: d. Follow local procedures for reporting control unit problems.

Host Communication PD

Symptom	Probable Cause	Action
	Host	Time is required for the system to perform a function. Wait for the function to complete.
Blank screen with no control unit indicator in the operator information area. Note: The operator information area may or may not contain other errors.	a. A bad connection between the control unit and the PC work station, or b. The control unit software, or c. The PC hardware, or d. The control unit hardware	a. Make sure the signal cable is connected. If the problem persists: b. Follow local procedures to re-IPL the control unit. If the problem persists: c. Refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC work station failures. If you did not find a problem: d. Follow local procedures for reporting control unit hardware problems.
Blank screen with no control unit indicator in the operator information area and no other errors in the operator information area.	The host	There is no host application active for this logical terminal. Follow local procedures for reporting host problems.

Symptom	Probable Cause	Action
	There is a customization mismatch (SNA vs. non-SNA) between the PC work station and the control unit.	Correct the problem at the PC work station or control unit, whichever is appropriate.
Any of the following:	<ul style="list-style-type: none"> a. The PC hardware or b. The 3270 Work-station Program 	<ul style="list-style-type: none"> a. Refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC work station failures. If you did not find a problem: b. Follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.
	<ul style="list-style-type: none"> a. A bad connection between the control unit and the PC work station, or b. The PC hardware, or c. The 3270 Work-station Program 	<ul style="list-style-type: none"> a. Make sure the signal cable is connected. b. Turn power off, then on again. Retry the operation. If the problem persists, refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC work station failures. If you did not find a problem: c. Follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.

Host Communication PD

Symptom	Probable Cause	Action
Any of the following:	The 3270 Work-station Program	Turn the power off, then on again. Retry the operation. If the problem persists, follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.
Any of the following:	The 3270 Work-station Program	Press the Reset Key (Right Alt on the Enhanced PC keyboard, Alt + F10 on an XT or AT keyboard) and retry the operation. If the problem persists, follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.
	The control unit	Follow local procedures to report problems with the control unit.
Any of the following:	a. The PC hardware, or b. The 3270 Work-station Program	a. Refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC hardware failures. If you did not find a problem: b. Follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.

Symptom	Probable Cause	Action
	a. The PC hardware, or b. The 3270 Workstation Program	a. Turn the power off, then on again. If the problem persists, refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC workstation failures. If you did not find a problem: b. Follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.
	The host or the control unit	Follow local procedures for reporting host or control unit problems.
	The host	Press the Reset Key (Right Alt on the Enhanced PC keyboard, Alt + F10 on an XT or AT keyboard) and retry the operation. If the problem persists, follow local procedures to report host problems.
	The connection between the control unit and the host	Press the Reset Key (Right Alt on the Enhanced PC keyboard, Alt + F10 on an XT or AT keyboard) and retry the operation. If the problem persists, follow local procedures to report problems with the control unit or host.

Note: *n* represents a number from 0 through 9.

Host Communication PD

Symptom	Probable Cause	Action
	The host	Press the Reset Key (Right Alt on the Enhanced PC keyboard, Alt + F10 on an XT or AT keyboard) and retry the operation. If the problem persists, follow local procedures for reporting host problems.
Any other problem	a. The 3270 hardware, or b. The 3270 Workstation Program	a. Refer to the <i>Guide to Operations</i> manual. If you found a hardware error, follow local procedures for reporting PC work station failures. If you did not find a problem: b. Follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.
	The PC work station	The system requires time to perform an internal function, WAIT.

Note: *n* represents a number from 0 through 9.

Program Error Codes

The following table lists error status codes displayed by the IBM 3270 Personal Computer for the specified program checks. These codes are in two groups:

- The first group, 701 to 730, signifies an attachment-dependent error condition.
- The second group, 750 to 772, signifies an attachment-independent device error condition.

For recovery from error conditions in both groups:

1. Press the Reset key (Right Alt on the Enhanced PC keyboard, Alt + F10 on an XT or AT keyboard) to reset the program check status, then retry the operation.
2. If the problem persists, follow local procedures and have available data from "PD Error Steps" 1, 2b, 3, 4, 5a, 6, 10, and 11 on page 2-69.

Error Code	Probable Cause	Effect (SNA Sense Code or Non-SNA Op Check)
701	Category not supported for BIND RU	1007
702	RU > 1,536 bytes received (SNA buffer overrun condition)	1002
703	Function not supported: <ul style="list-style-type: none"> ● Unsupported session control request ● Unsupported data flow control request ● Invalid signal request code (for example, 0001xxxx) 	1003
704	Format indicator (FI) bit not allowed	400F

Error Code	Probable Cause	Effect (SNA Sense Code or Non-SNA Op Check)
705	Sequence number error	2001
706	Chaining error	2002
707	Bracket state error	2003
708	Data traffic reset state	2005
709	HDX error	2004
711	Session limit exceeded	0805
712	Bracket bit reject	0813
713	Session already bound	0815
714	No LU-LU session	8005
715	LU not active	8009
716	Not enough bytes in the BIND RU	0821
717	Invalid support level (bytes 1–3)	0821
718	Invalid PLU protocol (byte 4)	0821
719	Invalid SLU protocol (byte 5)	0821
720	Invalid common protocol (bytes 6–7)	0821
721	Less than 64-byte RU length specified (byte 10)	0821
723	Invalid LU type (byte 14)	0821
724	Invalid screen size (bytes 20–24)	0821
725	Cryptography not supported (byte 26)	0821
726	Negative SNA response from the host	—
727	SNA exception request received	—
728	RM, RMA, or RB or Read Partition SF type received with EB and/or without CD	0829 command

Error Code	Probable Cause	Effect (SNA Sense Code or Non-SNA Op Check)
729	Read Partition SF type received in retry state	0871 Op Check
730	Read buffer command received in normal state, and partition 0 does not exist	1005
750	Invalid command received	1003 Op Check
751	SFE, MF, or SA order with invalid character set value in the range X'01'—X'FE'	0863 Op Check
752	<ul style="list-style-type: none"> ● Invalid address received following an SBA, RA, or EUA order ● MF order addressed to a non-field attribute location 	1005 Op Check
753	<ul style="list-style-type: none"> ● Data follows an RM, RB, or EAU command ● RA order received with invalid character ● GE order received with invalid character ● SFE, MF, or SA order with invalid attribute type ● SFE, MF, or SA order with invalid attribute value for highlight or color or character set value of X'FF' 	1003 Op Check
754	Datastream ended before all required bytes for an RA, EUA, SF, SFE, MF, SA, or GE order were received	1005 Op Check

Error Code	Probable Cause	Effect (SNA Sense Code or Non-SNA Op Check)
755	<ul style="list-style-type: none"> ● Invalid order received (EBCDIC code value less than X'40' is not recognized) ● EO's or subcontrol code received while 3270 Personal Computer was configured for non-EAB 	1003 Op Check
756	<ul style="list-style-type: none"> ● Invalid structured field type ● Structured field type not supported for current configuration 	1003 Op Check
757	<ul style="list-style-type: none"> ● Load PS SF with invalid PS alias ● Load PS SF load type not supported 	1003 Op Check
758	Set reply mode SF received with invalid mode	1003 Op Check
759	<ul style="list-style-type: none"> ● Read partition SF not last SF ● SF type incomplete ● SF length invalid ● SF length 0000 but not last SF ● Load PS SF length error ● Set reply mode SF with field/ext field mode and data following 	1005 Op Check
760	<ul style="list-style-type: none"> ● Erase/Reset Area SF reserved fields not zero ● Set Reply Mode SF attribute type reserved 	1008 Op Check

Error Code	Probable Cause	Effect (SNA Sense Code or Non-SNA Op Check)
761	<ul style="list-style-type: none"> • SF type ID invalid, not created, or nonzero in implicit partition state • Query PID not X'FF' • 3270 command received in explicit partition state and PID 0 does not exist 	1005 Op Check
762	<ul style="list-style-type: none"> • Create Partition SF parameter error • Set Window Origin SF parameter error 	1005 Op Check
763	<ul style="list-style-type: none"> • Create Partition SF caused a window overlap • Create Partition SF rejected because of insufficient resources 	1005 Op Check
764	<ul style="list-style-type: none"> • Load PS SF addressed PS invalid • Load PS SF extension-invalid color bits 	084C Op Check
765	<ul style="list-style-type: none"> • Load PS SF with invalid load start point • Load PS SF with invalid code point of X'FF' 	1005 Op Check
766	<ul style="list-style-type: none"> • Load PS SF with incomplete PS cell data • Load PS SF with invalid end flag for type 2 PS • Load PS SF with invalid type 2 header (end flag not encountered and not end of data) 	1005 Op Check
767	<ul style="list-style-type: none"> • Create Partition SF with invalid address mode • Create Partition SF with bits 0 through 3 of byte 4 not zero 	1003 Op Check

Error Code	Probable Cause	Effect (SNA Sense Code or Non-SNA Op Check)
768	Load PS SF extension: <ul style="list-style-type: none"> ● Invalid x units ● Invalid 6 units ● Invalid extended parameter length ● Extended parameter length missing 	1005 Op Check
769	Load PS SF extension: <ul style="list-style-type: none"> ● Invalid byte 8 ● Reserved bits 3—7 not zero ● Byte 11 not zero ● Byte 12 bits 5—7 not zero 	1003 Op Check
770	Structure field type (except 3270E) with start print in WCC, but not last structured field	1001 Op Check
771	Invalid command in structured field	1003 Op Check
772	<ul style="list-style-type: none"> ● Resources requested temporarily unavailable ● Create Partition: <ul style="list-style-type: none"> — No partition allocated to the LT — Number of partitions allocated to the LT exceeded — Scroll buffer specified but not allowed ● Set Attribute, Modify Field Start Field Extended: PSA-PSF requested, but PS not allocated to the LT ● Load PS: PS not allocated to the LT 	084B Op Check

Display Dump Problem Determination

1 Did you receive any INDDDnnn message?

YES Refer to Chapter 3, "Messages" in this manual to locate the explanation and then correct the problem. Then go to question 2.

NO Go to question 3.

2 Did the user response in the message section resolve your problem?

YES Continue with your work.

NO Go to question 3.

3 Do any of the right control keys (for example, PgDn, PgUp) fail to perform their functions?

YES Press the NumLk key once. Then go to 4.

NO Follow local procedures and have available:

- a. The file or diskette you were attempting to display and
- b. The data from "PD Error Steps" 1, 4, and 11 on page 2-69.

4 Do the right control keys function now?

YES Continue with your work.

NO Follow local procedures and have available:

- a. The file or diskette you were attempting to display, and
- b. The data from "PD Error Steps" 1, 4, and 11 on page 2-69.

Document Distribution File Transfer Problem Determination

1 Did you receive an INDXFnnn message?

YES Go to question 2.

NO Go to question 3 on page 2-37.

2 Did you receive message INDXF012, INDXF017, INDXF033 or INDXF034?

YES Locate the data exception code you received with message INDXF033 or INDXF034 in the following table and employ the explanation and user responses to resolve your problem.

NO Refer to Chapter 3, "Messages" in this manual. If the user responses for the message do not resolve the problem, go to question 3 on page 2-37.

Data Exception Code	Explanation	User Response
C20107	Invalid document interchange command. Host program error.	See responses on page 2-36.
C20108	Invalid document interchange operand. Host program error.	See responses on page 2-36.
C20201	Invalid document interchange prefix. Host program error.	See responses on page 2-36.

Data Exception Code	Explanation	User Response
C2020C	Invalid document unit introducer. Host program error.	See responses on page 2-36.
C2020E	Invalid document interchange profile introducer. Host program error.	See responses on page 2-36.
C20210	Invalid document content introducer. Host program error.	See responses on page 2-36.
C20213	Invalid document interchange suffix. Host program error.	See responses on page 2-36.
C20E07	Invalid document interchange format. Host program error.	See responses on page 2-36.
C20F02	Invalid document interchange unit ID length. Host program error.	See responses on page 2-36.
C20F09	Invalid document interchange command length. Host program error.	See responses on page 2-36.
C40209	Invalid document interchange operand value. Host program error.	See responses on page 2-36.
C40709	In attempting to transfer a file from the PC work station to the host, the file could not be found.	Check your spelling of the personal computer filename or search your directory to make sure that the file exists.

Data Exception Code	Explanation	User Response
C40909	The file was present on the diskette and you failed to specify "Replace" in the host command replace option.	Specify a different filename or change the Replace option to "Replace" or erase the file on diskette.
C40B17	I/O error. Possible damaged or full diskette/disk.	Retry the operation with a properly formatted diskette. If the error persists, refer to the <i>Guide to Operations</i> manual and run diagnostics for either the diskette or fixed disk.
C41407	You canceled the Transfer by pressing Ctrl + Break.	There is no user response.

Note: Any other (host) exception codes may be found in the appropriate host application manual. Refer to that manual to take appropriate action.

User Responses for Codes C20107 - C40209:

- a. Record the data exception code.
- b. Jump to the personal computer window from which you initiated the transfer.
- c. Terminate the program by pressing the End key.
- d. Restart the file transfer operation with the debug option as follows:
 - 1) Press Ctrl + Print (Ctrl + PrtSc on an XT or AT keyboard) This will cause the error buffer to be printed on a locally-attached printer when you enter the command described in step 2) below.

- 2) Type: TRANSFER w.D where **w** is the host window short name and **D** is the debug option. When you use the debug option, the buffer containing the error will be displayed and printed in hexadecimal with the messages you initially received.
 - 3) Jump to the host window and retry the file transfer.
 - 4) Press **Ctrl + Print** to toggle off printing (**Ctrl + PrtSc** on an XT or AT keyboard).
- e. If the above procedure does not resolve the problem, follow your local procedures and have available the error buffer printout obtained from steps d1 and d2 above, and the data from "PD Error Steps" 1 and 4 on page 2-69.

3

Did the Transfer program complete the operation without an error reported, but the data in the file is incorrect or missing?

YES If there is a host/incorrect data problem, follow local procedures and have available a copy of the PC file on diskette and data from "PD Error Steps" 1, 4, and 5b on page 2-69.

NO Go to question 4.

4

Did Transfer to the host terminate abnormally with an invalid error message, such as "File not found," when the file actually exists?

YES Make sure that the filename is typed correctly and retry if it is not. If the filename is correctly typed, follow local procedures and have available the diskette, or a copy of the diskette, on which the file that you are attempting to send to the host resides, and data from "PD Error Steps" 1 and 4 on page 2-69.

NO Go to question 5 on page 2-38.

5 Did Transfer hang?

- YES** Switch to the host session and verify that you still have a host connection. If the hang is not due to the host being inoperative, switch to the PC session in which the TRANSFER command was issued. If you are operating multiple PC windows, the window in which the TRANSFER command was issued might have had its operation suspended. The TRANSFER operation should begin again when it is restored to active status. If it does not, follow local procedures and have available:
- a. Information concerning whether the failure is for all transfers or only for a specific (type or size) file or dataset (if the transfer was to a disk or diskette)
 - b. Other applications that were running in the host and other PC sessions
 - c. Data from "PD Error Steps" 1 and 4 on page 2-69.

- NO** Go to question 6.

6 Did you receive a program check at the host?

- YES** Follow local procedures and have available data from "PD Error Steps" 1, 4, and 5b on page 2-69.
- NO** Go to question 7.

7 Did the PC work station send or receive too much file data or not the whole file?

- YES** Follow local procedures and have available a copy of the host and PC work station files, and data from "PD Error Steps" 1 and 4 on page 2-69.
- NO** Go to question 8 on page 2-39.

8

If you have applications in multiple PC windows, did you see random data in the PC work station window in which the TRANSFER command was issued, rather than a message?

YES Follow local procedures to isolate the application that claims system resources in the window that caused the random data to appear. Define a program information file (PIF) that identifies the application which is writing directly to the display buffer.

NO Go to question 9.

9

Did you see random data in the PC window when there is only one PC window and it is the one in which the TRANSFER command was issued?

YES Follow local procedures and have available data from "PD Error Steps" 1 and 4 on page 2-69.

NO Go to question 10.

10

Did you see a user error message that contradicts the situation, such as "Lost contact with host," but the host program is still running?

YES Take a dump at the point of failure. Then follow local procedures and have available data from "PD Error Steps" 1, 4, and 5a on page 2-69.

NO Go to 11.

11

Retry the problem determination procedures for this symptom or any others you may have had. If the problem persists, follow local procedures for diagnosing and correcting problems.

Dump Diskette Preparation Problem Determination

1 Did you receive any INDDP00x messages?

YES Go to question 2.

NO Go to question 4 on page 2-41.

2 Did you receive message INDDP006?

YES Use the CHKDSK (check disk) command on the diskette labeled DUMPDATA.00x that is causing the problem. Then go to question 3.

NO Refer to Chapter 3, "Messages" in this manual to correct the problem.

3 Find in the following chart the number of bytes that **MUST be available for the size and density of the diskette you are preparing:**

Diskette		
Size (inches)	Diskette Density	Available Bytes
5 1/4	360 KB	362,496
5 1/4	1.2 MB	1,213,952
3 1/2	720 KB	730,112

Are the correct number of bytes available for your diskette type?

YES Follow local procedures and have available data from "PD Error Steps" 4 and 12 on page 2-69.

NO Format another diskette. Make sure the diskette has no bad sectors on it. Do **not** specify /s in the FORMAT command. Then go to question 4 on page 2-41.

- 4 Did the preparation process complete properly with an INDDP003 message "INDDP003 Dump diskettes ready for use."**
- YES** Go to step 6.
- NO** Re-IPL the PC session and retry the dump diskette preparation process using the correct density diskettes which are properly formatted. Then go to question 5.
- 5 Did the dump diskette preparation process complete satisfactorily?**
- YES** Continue with your work.
- NO** Follow local procedures and have available data from "PD Error Steps" 4 and 12 on page 2-69.
- 6 Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.**

File Transfer Problem Determination

1 Did you receive an INDFTnnn message?

YES Refer to Chapter 3, "Messages" in this manual to locate the explanation and correct the problem. Then go to question 2.

NO Go to question 3.

2 Did the user response in the message resolve the problem?

YES Continue with your work.

NO Go to question 3.

3 Is the file transfer operation hung?

YES If you are in the host session, verify that you still have a host connection. If the hang is not due to the host being inoperative, press WSCtrl (Shift + Esc on the Enhanced PC and XT or AT keyboard) and verify that the workstation program is operative by entering the window short names to jump from one window to another. Then go to question 4.

NO Go to question 11 on page 2-44.

4 Is WSCtrl operative?

YES Press the WSCtrl key. If you are operating multiple PC windows, the window from which you issued the file transfer command might have had its operation suspended. When it is restored to active status, the file transfer operation should recommence. Go to question 5 on page 2-43.

NO Power off and on again. Follow your local procedures and have available data from "PD Error Steps" 1, 2c, 3, 4, and 5a on page 2-69.

5 Did file transfer recommence operation?

YES Continue with your work.

NO Go to question 6.

6 Did you receive an INDFT010 message?

YES Refer to Chapter 3, "Messages" in this manual to correct the problem. Then go to question 7.

NO Record the data on the host screen. While in the host session, press PF2 to end the file transfer operation. Do this several times if it does not work initially. Then go to question 8.

7 Did the "User Response" to the message resolve the problem?

YES Continue with your work.

NO Jump to the PC session where the file transfer was initiated. Press the Ctrl + Break keys (Ctrl + Pause on the Enhanced PC keyboard). Wait two to three minutes. Then go to question 8.

8 Did you receive an INDFT027 message "Communication sequence with host disrupted: file transfer canceled"?

YES Follow your local procedures and have available data from "PD Error Steps" 1, 2c, 3, 4, and 5a on page 2-69.

NO Power off and on again. Then follow your local procedures and have available data from "PD Error Steps" 1, 2c, 3, 4, and 5a on page 2-69.

9 Is the file transfer operation still hung?

YES Power off and on again. Log on to the host session and then go to question 10 on page 2-44.

NO Continue with your work.

10 Were you successful in logging on to the host session?

- YES** Follow your local procedures and have available data from "PD Error Steps" 1, 2c, 3, and 4 on page 2-69.
- NO** Follow local procedure for reporting host problems.

11 Did you receive an INDFT016 message or any other indication from the host that an error was experienced in the host file transfer program IND\$FILE?

- YES** Check with host support personnel to ensure that IND\$FILE is installed. Then go to question 12.
- NO** Go to question 13.

12 Is IND\$FILE installed?

- YES** Request a hexadecimal host dump of your user area. Follow your local procedures and have available data from "PD Error Steps" 1, 4, and 5b on page 2-69.
- NO** File Transfer will not work without IND\$FILE installed in the host. Inform host support personnel of this requirement.

13 Is there an error in the operator information area in the host screen?

- YES** Refer to "Host Communication Indicators" on page 2-21 in this chapter.
- NO** Go to question 14.

14 Is the host inoperative?

- YES** Try the operation when the host is available.
- NO** Go to question 15 on page 2-45.

15 Is the host file transfer program installed?

YES Report the condition according to your local procedures.

NO Go to question 16.

16 Was the file transfer command typed in the personal computer window?

YES Go to question 17.

NO Retry the operation, entering the command in the personal computer window.

17 Did file transfer complete operation without an error being reported, but there is a problem with the transferred file?

YES If there is missing or incorrect data, but file transfer completes operation without indication of error, check for the following:

- A user error (bad source data set, incorrect options specified)
- The user not requesting APPEND (the default is REPLACE)
- If the host is TSO, potential problems with user catalogs.

If there is a host/incorrect data problem, follow your local procedures and have available:

- a. A copy of the personal computer file on diskette.
- b. The data from "PD Error Steps" 1, 4, 5b, 7, 8, 9, and 10 on page 2-69.

NO Go to question 18 on page 2-46.

18 Did file transfer terminate abnormally with an invalid error message, such as "File not found," when the file actually exists?

YES Make sure the filename is correctly typed and retry the operation. Otherwise, follow your local procedures and have available:

- a. The diskette or a copy on which the file you are attempting to send resides.
- b. The data from "PD Error Steps" 1, 4, 7, 8, 9, and 10 on page 2-69.

NO Go to question 19.

19 Did you receive a program check at the host?

YES Follow your local procedures and have available data from "PD Error Steps" 1 and 5b on page 2-69.

NO Go to question 20.

20 Did the work station send or receive too much file data or not the whole file?

YES Follow your local procedures and have available:

- a. A copy of the host and personal computer files.
- b. Data from "PD Error Steps" 1 and 4 on page 2-69.

NO Go to question 21.

21 If you have applications in multiple PC windows, did you see random data, rather than a message, in the window from which the Transfer command was issued?

YES Follow your local procedures to isolate the application in the window that caused the random data to appear. Define a program information file to identify which application is writing directly to the display buffer.

NO Go to question 22 on page 2-47.

22 Did you see random data in the PC window, when there is only one PC window and it is the one in which the Transfer command was issued?

YES Follow your local procedures and have available data from "PD Error Steps" 1 and 4 on page 2-69.

NO Go to question 23.

23 Did you see a user error message that contradicts the situation, such as "Lost contact with host," but the host program is still running?

YES Follow local procedures and have available data from "PD Error Steps" 1, 2c, 3, 4, and 5a on page 2-69.

NO Go to 24.

24 Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.

Keyboard Problem Determination

1 Are you running on a PC XT or AT system?

YES Go to question 2.

NO Go to question 3.

2 Is the keyboard for which you are customized the one on which you are now running?

YES Go to question 3.

NO Recustomize your system to reflect the hardware in use.

3 Can you keystroke in any window?

YES Go to question 5.

NO If you have an NMI button, press it and take a dump. Turn power off and then on. Retry the operation. Then go to question 4.

4 Do you have a Power On Self Test (POST) error when you turn power on or are you unable to keystroke properly?

YES Refer to the *Guide to Operations* manual and take the appropriate action.

NO Go to question 5.

5 Is the problem with a PC session?

YES Re-IPL the workstation program. When you regain control, retry the operation that failed. Then go to question 9 on page 2-49.

NO Go to question 6 on page 2-49.

6 Is the problem with notepad window?

YES Follow your local procedures and have available data from “PD Error Steps” 1, 4, 5a, and 11 on page 2-69.

NO Go to question 7.

7 Is the problem with the host window?

YES Refer to “Host Communication Indicators” on page 2-21 in this chapter. If you are directed to take another dump, do so, but do not discard the dump you have taken with the NMI button.

NO Refer to the *Guide to Operations* manual. Then go to question 8.

8 Did the diagnostics in the *Guide to Operations* isolate a hardware problem?

YES Follow your local procedures for servicing the hardware.

NO Follow your local procedures and have available data from “PD Error Steps” 1, 4, and 5a on page 2-69.

9 Did this resolve the problem?

YES Continue with your work.

NO Go to question 10.

10 Do incorrect characters or numbers appear on the screen as you are typing?

YES Press CapsLock and retry the operation. Then go to question 11 on page 2-50.

NO Go to question 14 on page 2-50.

Keyboard PD

11 Does the failure still occur?

- YES** Press CapsLock. This is a toggle key. You should now be out of the CapsLock function. Press NumLk and retry the operation. Then go to question 12.
- NO** Continue with your work.

12 Does the failure still occur?

- YES** Press NumLk. This is a toggle key. You should now be out of the NumLk function. Refer to the *Guide to Operations* manual, then go to question 13.
- NO** Continue with your work.

13 Did the diagnostics in the *Guide to Operations* isolate a hardware problem?

- YES** Follow your local procedures for servicing the hardware.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 4, and 5a on page 2-69.

14 Does a function fail to execute when you press a valid multiple-key combination?

- YES** Refer to the *Guide to Operations* manual. Then go to question 15.
- NO** Go to question 16 on page 2-51.

15 Did the diagnostics in the *Guide to Operations* isolate a hardware problem?

- YES** Follow your local procedures for servicing the hardware.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 4, and 5a on page 2-69.

16 Does the wrong function execute when you press keys for another function?

- YES** Refer to the *Guide to Operations* manual. Then go to question 17.
- NO** Go to question 18.

17 Did the diagnostics in the *Guide to Operations* isolate a hardware problem?

- YES** Follow your local procedures for servicing the hardware.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 4, and 5a on page 2-69.

18 Does the keystroke problem appear immediately after you have changed the active PC window?

- YES** When you jump to a PC window, there could be a short delay caused by an application program characteristic within that window. Wait for the tasks within that window to stabilize, then keystroke as desired. If keystroking is not successful after a reasonable timeout delay (5 to 10 seconds for ordinary keystrokes, but greater than 30 seconds for slow devices like printers) there is an error within the DOS subsystem. Follow your local procedures and have available data from "PD Error Steps" 1, 2e, 3, 4, and 5a on page 2-69. Also have available the applications running in other PC sessions.
- NO** Go to question 19.

19 Are there other failures?

- YES** Refer to the *Guide to Operations* manual. Then go to 20 on page 2-52.
- NO** Continue with your work.

20 Did the diagnostics in the *Guide to Operations* isolate a hardware problem?

- YES** Follow your local procedures for servicing the hardware.
- NO** Follow your local procedures and have available data from “PD Error Steps” 1, 4, and 5a on page 2-69.

Patch Problem Determination

1 Did you receive an INDPAⁿⁿⁿ message?

YES Refer to Chapter 3, "Messages" in this manual to locate the explanation and correct the problem. Then go to question 2.

NO Go to question 3.

2 Did the user response to the message resolve your problem?

YES Continue with your work.

NO Go to question 3.

3 Did the failure you are experiencing occur during the process described under "Creating a Patch File with the Patch Create Utility" in Chapter 5?

YES Go to question 4.

NO Go to question 5 on page 2-54.

4 Did you receive message "INDPA028 Incorrect data entered. Retype"?

YES Verify that you are typing the data and check sum correctly. If so, follow local procedures and have available:

- a. The APAR number of the patch causing the problem
- b. The data you are entering, including the check sum
- c. The sequence of events that caused the failure, including the keys pressed and in what order.

NO Follow local procedures and have available:

- a. A copy of the patch file that you created
- b. The APAR number of the patch causing the problem

- c. The data you are entering, including the check sum
- d. The sequence of events that caused the failure, including the keys pressed and in what order.

5 Did you follow the procedures described under “Installing a Patch” In Chapter 5?

YES Go to question 6.

NO Correct your error and retry the operation.

6 Did you receive message “INDPA026 Patches Installed”?

YES Go to question 7.

NO Follow your local procedures and have available:

- a. A backup copy on diskette of the diskette you patched. Include the patch file.
- b. Data from “PD Error Steps” 1, 4, and 6 on page 2-69.

Notes:

- 1) You can safely delete any user applications from the backup diskette you are creating.
- 2) If Step b cannot be done because of the failure, describe the data on the screen, including the operator information area.

7 Does the original problem for which you installed the patch still exist?

YES Go to 10 on page 2-55.

NO Go to question 8.

8 Do you have a new problem?

YES Remove the patch that appears to have caused the new problem. Then go to question 9 on page 2-55.

NO Continue with your work.

9

Does the new problem still occur with the Patch removed?

YES Go to the beginning of this chapter and restart the problem determination process.

NO Follow your local procedures and have available:

- a. The APAR number of the patch causing the problem
- b. A copy of the patch file
- c. The sequence of events that caused the failure, including the keys pressed and in what order.

10

Note the APAR number that was to have fixed the problem and go to the beginning of this chapter and restart the problem determination process.

Personal Computer Application/Workstation Program Problem Determination

To make sure that the PC work station is not experiencing a hardware problem, refer to the *Guide to Operations* manual.

1 Did the diagnostics find a hardware problem?

YES Go to step 5 on page 2-57.

NO Go to question 2.

2 Does the personal computer application work with DOS alone, that is, without the workstation program loaded?

YES It is possible that the application functions in a manner that prevents its use on a system with the IBM 3270 Workstation Program (for example, if the application bypasses the normal DOS or BIOS interfaces). IPL the workstation program. Restart whatever personal computer applications were running when you first discovered the problem. Then go to question 3 on page 2-57.

NO The problem is with the personal computer application. Report the problem to the point of purchase.

3

Do random data appear in any of the personal computer windows with applications running in each window?

- YES** Follow your local procedures to isolate the application that claims system resources in the window that is causing random data to appear. Define a program information file (PIF) that identifies the application which is writing directly to the display buffer.
- NO** Test to see if the personal computer application works with only one personal computer window present. To do this:
- If you do not have an Extended Memory Adapter (XMA) card installed:
 - a. Issue the command INDMERGE and establish a single personal computer window.
 - b. Rerun the application in the single personal computer window.
 - If you do have an XMA card installed:
 - a. Recustomize your system with just one personal computer window.
 - b. Rerun the application in the single personal computer.
 - Then go to question 4.

4

Does the application run properly?

- YES** Follow your local procedures to determine the proper characteristics of this personal computer application, which has either not been defined in a PIF or incorrectly defined.
- NO** The application running is incompatible with the DOS subsystem. Follow local procedures and have available data from "PD Error Steps" 1, 4, and 6 on page 2-69.

5

Follow your local procedures for repairing hardware.

Printer Problem Determination

Before beginning the printer problem determination process, check to see if:

- The printer you are using is the one for which you have customized in the 3270 Workstation Program. You may check this fact by inserting the workstation program diskette in the active drive and issuing the command:

MORE < INDCFIG.FIL

in any PC session. In the list that will appear on the screen, the printer for which you have customized is found in the "Hardware" section under "Printer".

- You have the EGA hardware graphics adaptor installed when you use the graphics mode. If you receive a sound beep when you attempt to print certain unsupported graphics characters, refer to the appropriate section in the *Guide to Operations*, for information on correcting the problem.

1 Did you press the Shift + Print keys (Print Screen on the Enhanced PC keyboard, Shift + PrtSc on an XT or AT keyboard) and printing did not occur?

YES Ensure that the printer is "Ready" and the personal computer window from which you are attempting to print is active, and retry.

Note: The printer should be ready if:

- a. It has power on, is attached to the system unit, is online, and
- b. There is paper in the printer.

If you cannot make the printer ready, refer to its accompanying manual to find and fix the problem.

If the printer is "Ready" but printing still does not occur, refer to the *Guide to Operations* manual. Then go to Question 2.

- NO** Go to question 3.

2

Did the diagnostics find a hardware problem?

YES Follow local procedures for servicing the hardware.

NO Follow your local procedures and have available a description of the data on the screen, and data from "PD Error Steps" 1 and 4 on page 2-69.

3

Did you press WSCtrl + Print (Shift + Esc, then Alt + F7 on an XT or AT keyboard) and printing did not occur?

YES Ensure that the printer is "Ready" and retry.

Note: The printer should be ready if:

- a. It has power on, is attached to the system unit, is online, and
- b. There is paper in the printer.

If you cannot make the printer ready, refer to its accompanying manual to find and fix the problem.

If the printer is "Ready" but printing still does not occur, refer to the *Guide to Operations* manual. Then go to question 4.

- NO** Go to question 5 on page 2-60.

4

Did the diagnostics find a hardware problem?

YES Follow local procedures for servicing the hardware.

NO Follow your local procedures and have available a description of the data on the screen, and data from "PD Error Steps" 1 and 4 on page 2-69.

5 Does the print consist of Invalid or Incomplete data?

YES Refer to the *Guide to Operations* manual. Then go to question 6.

NO Go to question 7.

6 Did the diagnostics find a hardware problem?

YES Follow local procedures for servicing the hardware.

NO Follow your local procedures and have available a description of the data on the screen, and data from "PD Error Steps" 1 and 4 on page 2-69.

7 Did the print complete operation and then the system hang?

YES Follow your local procedures and have available a description of the data on the screen, and data from "PD Error Steps" 1 and 4 on page 2-69.

NO Go to 8.

8 Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.

Save and Restore Problem Determination

1 Did you receive an INDSRnnn message?

YES Refer to Chapter 3, "Messages" on page 3-1 in this manual to locate the explanation and correct the problem. Then go to question 2.

NO Go to question 3.

2 Did the problem persist?

YES Go to question 3.

NO Continue with your work.

3 Is the saved or restored data different from what you expected, and did you specify the correct options?

YES Specify the correct options and retry.

NO Refer to the *Guide to Operations* manual. Then go to question 4.

4 Did diagnostics find a hardware problem?

YES Follow your local procedures for servicing the hardware.

NO Follow your local procedures and have available all files associated with the command (if a Save or Restore command was entered and some of the data was written to a file), as well as data from "PD Error Steps" 1, 4, and 11 on page 2-69.

System Error Problem Determination

You are here because you have received an INDSY001, INDSY002, or INDSY003 error message. If you received any other INDSY0nnn message, refer to that message in Chapter 3, "Messages" to locate the explanation and correct the problem.

Messages INDSY001, INDSY002, and INDSY003 produce an 8-character hexadecimal return code, which is listed in Chapter 4, "Return Codes" on page 4-1. Refer to this listing for the correct user response.

If you received message INDSY001 or INDSY002, you may take a dump by pressing the D key. For other dumping techniques under other circumstances, see "Taking the Dump" on page 1-10.

If you have received message INDSY003, first press any key to continue. Then you may take a dump using one of only the last three ways described in "Taking the Dump" on page 1-10.

System Startup Problem Determination

If you received a system startup message other than INDST002 refer to Chapter 3, "Messages" on page 3-1 in this manual to locate the explanation and correct the problem.

1 Was this the first time you tried to load this copy of the 3270 Workstation Program?

If you installed the XMA or VDISK device drivers, go to question 2.

YES Go to question 2.

NO If the workstation program loaded successfully in the past and you haven't made any changes to it, your copy of the workstation program could have been corrupted. Try to load another copy of your system diskette. If it works, replace your original with the copy. If it doesn't work, continue with question 4 on page 2-64.

2 Are you using the XMA or VDISK device drivers?

YES Check your CONFIG.SYS file to make sure that you have reserved enough space for the 3270 Workstation Program to load. See the appendix that deals with XMA device drivers in the *3270 Workstation Program User's Guide* for more details. If this fails to resolve the problem, continue with question 3 on page 2-64.

NO Go to question 3 on page 2-64.

3 Do you have an XMA (Expanded Memory Adapter) installed?

The XMA card is identified by an "X" stamped on a slot on the back of your system unit.

YES The switch or jumper settings on the system board or XMA card could be incorrect. To work with the 3270 Workstation Program, the XMA card and system unit must be configured so that XMA fills memory from 256KB to 640KB. All other memory in that range must be either removed or disabled to avoid conflicts.

For 3270 PCs:

If you have the XMA installation instructions, review them to make sure the XMA card was installed properly. If you don't have the installation instructions, use the Switch and Jumper Settings in your *Guide to Operations* appendix.

For Other PC work stations:

Check the documentation that came with the XMA card and make sure it was installed properly and that all switches and jumpers are correct.

If this fails to resolve the problem, continue with question 4.

NO Go to question 4.

4 Did you receive message INDST002?

YES Go to question 5 on page 2-65.

NO Check your hardware for problems. See the *Guide to Operations* manual for procedures on problem determination and testing. If this fails to resolve the problem, see step 9 on page 2-65.

5 Were you trying to start a user application that reserves storage during startup?

- YES** Retry the startup operation without loading the user application. Then go to question 7.
- NO** Check your hardware for problems. See the *Guide to Operations* manual for procedures on problem determination and testing. Then go to question 6.

6 Did the diagnostics find a hardware failure?

- YES** Follow your local procedures for servicing the hardware.
- NO** Follow your local procedures and have available:
- The sequence of events that caused the failure
 - A copy of the system diskette
 - The message number (INDST002).

7 Was startup successful?

- YES** More storage will be required if both the user application and the workstation program are required at the same time.
- NO** Power off and on. Then go to question 8.

8 Was the Power-On Self Test (POST) successful?

- YES** More storage will be required if both the user application and the workstation program are required at the same time.
- NO** Refer to the *Guide to Operations* and follow your local procedures for servicing the hardware.

9 Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.

Trace Problem Determination

1 Did you receive any INDTRnnn message?

- YES** Refer to Chapter 3, “Messages” on page 3-1 in this manual to locate the explanation and correct the problem. Then go to question 2.
- NO** Refer to the *Guide to Operations* manual. Then go to question 3.

2 Did the user response in the message resolve your problem?

- YES** Continue with your work.
- NO** Refer to the *Guide to Operations* manual. Then go to question 3.

3 Did the diagnostics find a hardware problem?

- YES** Follow your local procedures for repairing the hardware.
- NO** Follow your local procedures and have available the exact trace command entered, and data from “PD Error Steps” 1 and 4 on page 2-69.

Work Station Control Problem Determination

1 Did you receive an INDWSnnn message?

- YES** Refer to Chapter 3, "Messages" on page 3-1 in this manual to locate the explanation and correct the problem. Then go to question 2.
- NO** Go to question 3.

2 Did the user response in the message resolve your problem?

- YES** Continue with your work.
- NO** Go to question 3.

3 Is the problem with Autokey?

- YES** Refer to "Autokey Problem Determination" beginning on page 2-4 in this chapter.
- NO** Go to question 4.

4 Is the problem with Copy, Help, List, SetUp, Browse, Move, Size, Color, Corner, Hide, Jump, ChgSc, or Enlarge?

- YES** Refer to the *Guide to Operations* manual. Then go to question 5.
- NO** Go to 6 on page 2-68.

5 Did the diagnostics find a hardware problem?

- YES** Follow your local procedures for servicing the hardware.
- NO** Follow your local procedures and have available data from "PD Error Steps" 1, 2f, 3, 4, 5a, and 6 on page 2-69.

- 6** **Retry the problem determination procedures for this symptom or any others you may have encountered. If the problem persists, follow local procedures for diagnosing and correcting problems.**

PD Error Steps

Use these steps only when you are directed to do so from problem determination procedures in this chapter.

1. Record the sequence of events that caused the failure, including the keys pressed and in what order.
2. Reproduce the operation while running trace event(s):
 - a. 1 and 71
 - b. For CUT customized work stations: 4 through 9
For DFT customized work stations: 10 through 38 and 110 through 114
 - c. For CUT customized work stations: 62, 63, 65, 66, 68, and 69
For DFT customized work stations: 72, 73, 74, 77, 78, and 82
 - d. For CUT customized work stations: 61, 62, and 63
For DFT customized work stations: 1, 71, and 76
 - e. 1, 71, and 106
 - f. 80
3. If the problem persists, issue the command TRACE OFF /D to take a system dump.

Note: You can also take a dump by pressing the NMI button or Alt + Ctrl + Test (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard).

4. Record the system level. To do this, look at your APAR list as described under "Listing the Current System Level and Currently Installed APARs" on page 5-11.
5. a. Have the dump available.

Note: If you are taking a dump because of a keyboard problem, take it by pressing the NMI button. See "Dump Data Utilities" on page 1-8 for more information about taking dumps.

- b. Have a hexadecimal host dump available, if possible.

PD Error Steps

6. Record the system configuration, which is a list of the hardware, including installed options. This may be found in the *Guide to Operations* binder and the contents of the customization panels.
 - a. Insert the customized system diskette in the active drive.
 - b. If you have a printer, type:
TYPE INDCFIG.FIL> PRN and press Enter.
 - c. If you do not have a printer, type:
MORE < INDCFIG.FIL and press Enter.
Write down the contents of the customization panels.
7. Record the customization attachment option specified: CUT or DFT.
8. Record the control unit details: code level, model, configuration support, SNA/non-SNA, local or remote host attachment.
9. Record the access method used and its release level.
10. Record the operating system running on the host (for example, VM, MVS).
11. Have a print of the screen after the failure occurs available.
12. Have the diskette DUMPDATA.00x which is causing the problem available.

Chapter 3. Messages

Introduction	3-2
INDCU Customization Messages	3-3
INDDD Display Dump Messages	3-18
INDDE Display Environment Messages	3-20
INDDP Dump Diskette Preparation Messages	3-22
INDEM Keystroke Emulation Messages	3-25
INDFT File Transfer Messages	3-26
INDID Interchange Document Profile Messages	3-37
INDKD Keyboard Definition Utility Messages	3-39
INDPA Patch Installation Messages	3-45
INDSM Split/Merge Messages	3-54
INDSP System/Program Information File Messages	3-60
INDSR Save/Restore Messages	3-64
INDST Startup Messages	3-73
INDSY System Error Messages	3-76
INDTR Trace Messages	3-86
INDWS Work Station Control Messages	3-88
INDXF Document Distribution File Transfer Messages	3-101
Message Error Steps	3-111

Introduction

Use this chapter whenever you see a message on your screen with a prefix like one of those listed below.

The prefix of each message tells you what operation you were performing when the message was produced. These are the meanings of the message prefixes:

INDCUnnn for Customization Messages
INDDDnnn for Display Dump Messages
INDDEnnn for Display Environment Messages
INDDPnnn for Dump Diskette Preparation Messages
INDEMnnn for Keystroke Emulation Messages
INDFTnnn for File Transfer Messages
INDIDnnn for INDIDP File Creation Messages
INDKDnnn for Keyboard Definition Utility Messages
INDPAnnn for Patch Installation Messages
INDSMnnn for Split/Merge Messages
INDSPnnn for System/Program Information File Messages
INDSRnnn for Save and Restore Messages
INDSTnnn for Startup Messages
INDSYnnn for System Error Messages
INDTRnnn for Trace Messages
INDWSnnn for Work Station Control Messages
INDEXFnnn for Document Distribution File Transfer Messages

If your personal computer session is active and you receive a message not preceded by one of the following message numbers, refer to either the *IBM Personal Computer Disk Operating System* manual or to the manual for the application you are running.

The messages described in this chapter are grouped alphabetically. Within each group, the messages are in numerical order. The message number and the message text are in **bold** type. A message explanation and response follow each message.

Note: “Local procedures,” to which you are frequently referred during this chapter, are the procedures followed in your location for isolating problems or making repairs.

INDCU Customization Messages

INDCU001 Changed item restored to previous value

Explanation: You have made an invalid change to a field on a customization panel. The incorrect value has been replaced by its previous value.

User Response: Correct the value of the field or accept the replaced value.

INDCU002 No more space to insert into this field

Explanation: This message only appears when you are in insert mode. There is a maximum number of characters allowed in this field. You have tried to enter more characters than the field allows.

User Response: Correct the entry and try again.

INDCU003 Only A – F and 0 – 9 are allowed in this field

Explanation: Only hexadecimal values are allowed in this field. The only valid characters are 0 through 9 and A through F.

User Response: Correct the value in the field. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 appears.

INDCU004 You can type only in input fields

Explanation: You have tried to type on a customization panel in a place where it is not valid to do so, for example, a selectable field.

User Response: To type on a customization panel, position the cursor on an input field. If the cursor is on a selectable field, press PF2 to select the option.

INDCU

INDCU005 Only numbers are allowed in this field

Explanation: You can enter only numbers 0 through 9 for the value of this field.

User Response: Correct the value in the field. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 appears.

INDCU006 Short name has already been used

Explanation: Each session must have a unique short name. The short name you have just typed has already been used for another session.

User Response: Correct the value in the field. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 appears.

INDCU007 Name does not start with a letter (A-Z)

Explanation: You must use a letter A through Z for the short name. The long name must begin with a letter A through Z.

User Response: Correct the value in the field. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 appears.

INDCU008 DOS must be version 2.10 or higher

Explanation: You are using a version of DOS that is too low. The customization program requires DOS to be version 2.10 or higher.

User Response: Try again with the correct version of DOS.

INDCU009 Number entered is too large

Explanation: The number you have typed is greater than the maximum value allowed for that field.

User Response: Correct the value in the field. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 appears.

INDCU010 Number entered is too small

Explanation: The number you have typed is less than the minimum value allowed for that field.

User Response: Correct the value in the field. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 appears.

INDCU011 Failed to write xxxxxxxx.xxx

Explanation: An error has been detected during an attempt to write the file with the variable name xxxxxxxx.xxx. Your diskette may be full.

User Response: Check to see if the output diskette is full or has unnecessary files on it. Ensure that you have an output diskette formatted with the /s option. Further ensure that you are working with the correct diskettes or a backup. Retry customization if you have acted on any of the above. If none of the above caused the problem, refer to the hardware problem determination information in the *Guide to Operations*. If no hardware problem is found, follow local procedures and have available data from "Message Error Steps" 1 and 10 on page 3-111.

INDCU

INDCU012 Failed to read xxxxxxxx.xxx

Explanation: An error has been detected during an attempt to read the file with the variable name xxxxxxxx.xxx.

User Response: Ensure that you are using the correct diskettes or a backup as input for the customization process. If not, retry with the correct diskettes. If the above has not caused the problem, refer to the hardware problem determination information in the *Guide to Operations*. If no hardware problem is found, follow local procedures and have available data from "Message Error Steps" 1 and 10 on page 3-111.

INDCU013 Failed to find xxxxxxxx.xxx

Explanation: The file with the variable name xxxxxxxx.xxx could not be found.

User Response: Ensure that you are using the correct diskettes or a backup as input for the customization process. If not, retry with the correct diskettes. If the above has not caused the problem, refer to the hardware problem determination information in the *Guide to Operations*. If no hardware problem is found, follow local procedures and have available data from "Message Error Steps" 1 and 10 on page 3-111.

INDCU014 Contents of file xxxxxxxx.xxx are unusable

Explanation: The contents of the file with the variable name xxxxxxxx.xxx are in an unexpected and unusable format.

User Response: Ensure that you are using the correct diskettes or a backup as input for the customization process. If not, retry with the correct diskettes. If the above has not caused the problem, refer to the hardware problem determination information in the *Guide to Operations*. If no hardware problem is found, follow local procedures and have available data from “Message Error Steps” 1 and 10 on page 3-111.

INDCU015 Customization incomplete - system not created

Explanation: You have pressed Esc to quit the customization program while it was creating a customized system diskette.

User Response: The system on the diskette is incomplete and cannot be used. The customization program remains on the “Creating Customized System” panel, and the values that you selected for your customized system will still be valid. If you want to create the same customized system on the same diskette, press PF3.

INDCU

INDCU016 Not enough free storage to run this program

Explanation: You are trying to run the customization program on a work station with insufficient storage. A minimum of 100K bytes of free storage is required.

User Response: Retry the customization without initially loading the 3270 Workstation Program or a user application. If the above has not caused the problem, refer to the hardware problem determination information in the *Guide to Operations*. If no hardware problem is found, follow your local procedures and have available data from "Message Error Steps" 1 and 10 on page 3-111.

INDCU017 Insert DOS diskette in drive x

Explanation: You are trying to create a system on a diskette that has not been formatted. This message appears along with messages CU031 and CU032 after you have pressed PF3 from the "Creating Customized System" panel to create a customized system.

User Response: Insert the DOS diskette into the diskette drive indicated by the message and close the drive door. The customization program formats the system diskette, copies the DOS files to it, and then creates the customized system.

INDCU018 Insert customized system diskette in drive x

Explanation: This message is displayed by the customization program when you select a drive from which default values will be read.

User Response: Insert the previously-customized system diskette in the drive indicated by the message, and close the drive door. You can use only a version 3.0 customized control program or a version 1.0 customized workstation program for the default values.

INDCU019 Insert target system diskette 1 in drive x

Explanation: This message is displayed by the customization program while it is creating your customized system. Depending upon the options specified during customization, you may need to use only one target system diskette.

User Response: Insert the first target system diskette in the diskette drive indicated by the message, and close the lever on drive A.

INDCU020 Insert utilities diskette in drive x

Explanation: You answered Yes to the message INDCU038.

User Response: Insert a diskette that has been formatted with the /s parameter in drive x.

INDCU021 Insert Workstation Program diskette 1 in drive x

Explanation: This message is displayed by the customization program while it is creating your customized system.

User Response: Insert workstation program diskette 1 in the diskette drive indicated by the message and close the drive door.

INDCU022 Insert Workstation Program diskette 2 in drive x

Explanation: This message is displayed by the customization program while it is creating your customized system.

User Response: Insert workstation program diskette 2 into the diskette drive indicated by the message and close the drive door.

INDCU

INDCU023 Strike any key when ready...

Explanation: The program displays this message whenever you are prompted to insert this diskette.

User Response: When you are ready to proceed, press any key.

INDCU024 Drive x does not exist

Explanation: This message appears if:

- You are on the “Home” panel, and you did not type the letter of a drive that exists on your current system, or
- You did not type a valid drive letter A through F.

User Response: On the “Home” panel, type the correct letter of the drive that exists on your current system.

For any other panel, type the desired letter A through F. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 will appear.

INDCU025 Embedded blanks are not allowed in long names

Explanation: You are not allowed to use blank characters in long names. Only letters (A through Z) and numbers (0 through 9) can be used.

User Response: Correct the long name. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 will appear.

INDCU026 Only letters (A through Z) and numbers (0 through 9) are allowed

Explanation: You can enter only letters (A through Z) and numbers (0 through 9) in the value for this field.

User Response: Correct the name. If you need to restore the previous value, move the cursor off the field. The previous value and message INDCU001 will appear.

INDCU027 Cannot customize system with current values

Explanation: You have pressed PF3 to create your system diskette, and a problem exists with your current responses. The message appears with message INDCU028.

User Response: Wait for message INDCU028 to appear and follow the user response for that message.

INDCU028 Customized system is too large

Explanation: The current values you specified would generate a customized system that could not fit in the storage size you chose on the "Home" panel.

User Response: Review your hardware and software options and make changes where possible to reduce the size of the customized system so that it fits in the existing storage size. For more information, see the appendix on storage estimates for customization in the *User's Guide*.

If you get this message and choose to continue with the customization routine:

- The message appears as long as the customization routine cannot fit the customized system in the existing storage size.
- This message no longer appears when you change the options so that the customization routine can fit the customized system in the existing storage size. For example, a common cause is the PC session storage sizes. Either the defaults are too large and you have not changed them yet, or you have specified your personal computer sessions and you have gone back to change other options.

INDCU029 An AUTOEXEC.BAT file exists on target disk

INDCU030 Do you want it replaced? (Y/N)

Explanation: The customization routine found an AUTOEXEC.BAT file on the target disk or diskette.

User Response: If you want it replaced by the AUTOEXEC.BAT file created by the customization routine, type **Y**. Otherwise, type **N** to continue using the existing AUTOEXEC.BAT file. Make sure INDCIPL is the first line of the file.

INDCU031 Incorrect printer entered

Explanation: You did not enter a valid printer number.

User Response: See the customization “Home” panel and then enter the correct printer number.

INDCU032 Target system diskette requires formatting

Explanation: You are trying to create a system on a target diskette that has not been formatted.

User Response: Respond to the message(s) accompanying this one, then press PF3.

INDCU033 Type drive letter for DOS diskette and press PF3

Explanation: This message appears along with message INDCU032 on a 3270 Personal Computer, or after INDCU043 on a 3270 Personal Computer AT. The series of messages indicated appear after you have pressed PF3 from the creating customized system panel when you create a customized system.

User Response: Insert the DOS diskette, type the letter of the drive, and then press PF3.

INDCU

INDCU034 System files already exist on target disk

INDCU035 Do you want them replaced? (Y/N)

Explanation: You are recustomizing a system onto a previously customized system diskette or fixed disk. These messages appear after you have pressed PF3 from the "Creating Customized System" panel when you create a customized system.

User Response:

Type **Y** if:

- You have patched any files on your system diskette, or received a refresh of the code.
- You are changing from CUT to DFT control unit attachment or vice versa.
- You are changing from a SNA to a non-SNA host attachment or vice versa.

Otherwise, type **N**.

INDCU036 Customization complete

Explanation: The customization program has transferred all the files needed for your customized system onto the target diskette.

User Response:

- You can end the customization program by pressing Esc.
- You can create another copy of this same system with the same values by pressing PF3.
- You can create a different customized system by changing any of the values on the customization panels. Press End to get to the "Creating Customized System" panel, then press PF3.

INDCU037 Incorrect diskette inserted

Explanation: You have inserted an incorrect diskette in response to one of the customization prompts.

User Response: Remove the incorrect diskette from the drive indicated either by message INDCU019 or INDCU020. Insert the correct diskette in the drive and press any key to continue.

INDCU038 Do you want 3270 Workstation utilities copied? (Y/N)

Explanation: The customization routine copies utilities if you reply **Y**.

User Response: Answer **Y** if you want these utilities copied.

**INDCU039 A CONFIG.SYS file exists on target disk
Do you want it replaced? (Y/N)**

Explanation: The customization routine found a CONFIG.SYS file on the target disk or diskette.

User Response: If you want it replaced by the CONFIG.SYS file created by the customization routine, type **Y**. Otherwise, type **N** to continue using the existing CONFIG.SYS file. Make sure the line FILES=40 is in the CONFIG.SYS file.

INDCU040 Customized system would be xxxK too large

Explanation: If you attempted to customize with the current values, the system would exceed the amount of storage in the target work station by the value in **xxx**.

User Response: Change the current values appropriately so that the customized system will not exceed the amount of storage in the target work station.

INDCU

INDCU041 A name is required for each system extension

Explanation: You specified a non-zero value for the number of user-supplied system extensions, but you did not add a module name on the "User-Supplied System Extension Options" panel(s).

User Response: Add the module name and any other information necessary. Retry the operation.

INDCU042 Insert target system diskette 2 in drive x

Explanation: This message is displayed by the customization program while it is creating your customized system.

User Response: Insert the second system diskette in the diskette drive indicated by the message, and close the drive door.

INDCU043 Are you formatting a high capacity diskette? (Y/N)

Explanation: You are customizing on an AT, and AT diskettes can be either 360K or 1M. A 1M diskette is called a high capacity diskette.

User Response: Enter Y if you are using a 1M diskette. Otherwise, enter N.

INDCU044 Insert Workstation Program diskette 3 in drive x

Explanation: This message is displayed by the customization program while it is creating your customized system.

User Response: Insert workstation program diskette 3 into the diskette drive indicated by the message and close the drive door.

INDCU045 Batch file not allowed when Multi DOS is No

Explanation: You tried to specify a batch file and set Multi DOS to No at the same time.

User Response: If you want Multi DOS set to No, then specify either a .COM or .EXE file for your PC session. If you want Multi DOS set to Yes, specify a .BAT file for that PC session. If you want to run a batch file with Multi DOS set to No, then specify COMMAND.COM on the customization panel. Then, edit your AUTOEXEC.BAT file and call the .BAT file you want to run.

INDDD Display Dump Messages

INDDD001 Only COUNTER, DUMP, or TRACE are valid parameters

Explanation: You entered an incorrect parameter. COUNTER, DUMP, or TRACE are the only valid parameters for the INDDISP command.

User Response: Choose the appropriate parameter.

INDDD002 Parameter required. Use COUNTER, DUMP, or TRACE

Explanation: You did not enter a required parameter after you typed the INDDISP command.

User Response: Choose the appropriate parameter for the INDDISP command.

INDDD003 Diskette or file not found

Explanation: This message appears when you inserted the incorrect diskette in response to messages INDDD004, INDDD005, or INDDD006.

User Response: None. INDDD004, INDDD005, or INDDD006 appears.

INDDD004 Insert DUMPDATA.00x in drive x Press Enter to continue or End to quit

Explanation: This message prompts you to insert the appropriate diskette.

User Response: Insert the requested diskette and press Enter. If you press the End key, the display dump utility is ended.

- INDDD005 Insert diskette with TRACE.DMP in drive x. Press Enter to continue or End to quit**

Explanation: This message prompts you to insert the diskette containing the file TRACE.DMP previously created using the command INDSAVE TRACE.

User Response: Insert the diskette and press Enter. If you press the End key, the display dump utility is ended.

- INDDD006 Insert diskette with COUNTER.DMP in drive x. Press Enter to continue or End to quit**

Explanation: This message prompts you to insert the diskette containing the file COUNTER.DMP previously created using the command INDSAVE COUNTER.

User Response: Insert the diskette and press Enter. If you press the End key, the display dump utility is ended.

- INDDD007 Error reading drive x**

Explanation: An error was detected while trying to read the diskette in drive x.

User Response: Make sure that the correct diskette is in drive x and that the drive door is closed. Try the procedure again.

INDDDE Display Environment Messages

INDDDE001 xx - Format incorrect. Space between short names

Explanation: The window short name specified contains more than one character.

User Response: Retry the command INDDENV, using short names of existing personal computer session windows separated by spaces. For example, INDDENV A B.

INDDDE002 No window with this short name - x

Explanation: There is no window with that short name.

User Response: Retry the command INDDENV, using a short name of an existing personal computer session window.

INDDDE003 Window short name must be a letter A – Z

Explanation: The window short name specified is not alphabetic.

User Response: Retry the command INDDENV, using a short name of an existing personal computer session window.

INDDDE004 x must be a PC window short name

Explanation: The window name specified is either a host or notepad window, or a non-stoppable environment. The environment information will not be displayed.

User Response: Retry the command INDDENV, specifying a valid one-character alphabetic window name that is in a personal computer environment.

INDDE005 System not customized for multiple PC environments

Explanation: On the “PC Options” panel of the customization procedure, you specified **No** for multi-PC environment capability. No environment information will be displayed.

User Response: None.

INDDE006 System error - xxxx

Explanation: There is a system error. The variable information xxxx is a return code.

User Response: Refer to Chapter 4, “Return Codes” for a description of the problem and possible solutions.

INDDE007 Not enough storage for display environment program

Explanation: There is not enough storage in the environment to run the display environment program.

User Response: If there are multiple PC environments in the system, try the display environment command INDDENV in a different personal computer window that displays the DOS prompt. If this problem persists in all personal computer windows, use the DOS command CHKDSK to display storage information.

INDDE008 xx additional PC environments can be created

Explanation: This informational message tells you the number of additional personal computer environments that can be created, providing there is sufficient storage.

Note: If the XMA card is installed, you cannot use INDSPLIT to create new environments, so xx will be 00.

User Response: None.

INDDP Dump Diskette Preparation Messages

**INDDP001 Insert diskette DUMPDATA.00x in drive x
Press any key to continue or Q to quit**

Explanation: This message prompts you to insert a blank, formatted diskette DUMPDATA.001, DUMPDATA.002, or DUMPDATA.003.

User Response: Insert the appropriate diskette. Press any key to continue the dump diskette preparation process, or press the Q key to quit the process.

**INDDP002 Diskette not blank. Insert DUMPDATA.00x in drive x
Press any key to continue or Q to quit**

Explanation: You inserted a non-blank diskette.

User Response: Insert the appropriate blank, formatted diskette. **Make sure you do not use the /s option** on the FORMAT command. Press any key to continue the dump diskette preparation process or press Q to quit the process. If the problem persists, issue the command DIR (directory) on the diskette labeled DUMPDATA.00x that is causing the problem.

- If the directory shows the file named COMMAND.COM, the diskette was formatted with the /s option. Reformat it without the /s option.
- If the directory shows the presence of any file, the diskette is not blank. Use only blank, formatted diskettes. Do not specify the /s option.

Note: Make sure there are no bad sectors on the diskette.

INDDP003 Dump diskette(s) ready for use

Explanation: The dump diskette preparation utility has completed preparing the diskette(s).

User Response: None.

INDDP004 Dump diskette preparation canceled

Explanation: You have canceled the dump diskette preparation utility, or there was an error in the preparation of the diskettes.

User Response: Try the procedure again.

INDDP005 DOS error creating DUMPDATA.00x

Explanation: The dump diskette preparation utility has encountered a DOS error.

User Response: Reformat the diskette specified in the message and any other previously prepared dump diskettes. **Make sure you do not use the /s option** on the FORMAT command. Retry the procedure. If the problem persists, re-IPL the PC session and retry the dump diskette preparation process. If this is unsuccessful, follow local procedures and have available data from "Message Error Steps" 4 and 11 on page 3-111.

INDDP006 Insufficient space on diskette to create DUMPDATA.00x

Explanation: The dump diskette contained hidden files which do not leave enough space on the diskette for this utility.

User Response: Format an appropriate number of diskettes containing the necessary number of available bytes as described in “Preparing Formatted Dump Diskettes” on page 1-8. **Make sure you do not use the /s option** on the FORMAT command, and that there are no bad sectors on the diskette(s). Retry the procedure. If the problem persists, refer to “Dump Diskette Preparation Problem Determination” on page 2-40.

INDDP007 Incompatible diskette. Insert a xxxKB diskette

Explanation: You have inserted a second (or third) diskette that is incompatible (different density) with the diskette just previously used.

User Response: If you want to continue, insert a formatted diskette of the same density as the diskette previously used. Otherwise, press Q and start over using a formatted high density (for example, 1.2 M) diskette.

If the preparation process does not complete properly with an INDDP003 message, re-IPL the PC session and retry the dump diskette preparation process using the correct density diskette(s). If the process still does not complete successfully, follow local procedures and have available the data from “Message Error Steps” 4 and 11 on page 3-111.

INDEM Keystroke Emulation Messages

INDEM001 Incorrect level of the 3270 Workstation Program

Explanation: The 3270 keystroke emulation command (INDEML) requires you to use Version 3.0 of the control program or 1.0 of the workstation program.

User Response: If you are using Version 1.0 of the workstation program, you cannot use 3270 keystroke emulation. If you are using Version 2.0 of the control program, 3270 keystroke emulation is a customization option; the INDEML command is not used. If you want to use the INDEML command, you must use version 3.0 of the control program or version 1.0 of the workstation program.

INDEM002 System not customized for multiple DOS function

Explanation: 3270 keystroke emulation (INDEML) requires the multiple DOS function.

User Response: Your system must be recustomized to include the multiple DOS function.

INDEM003 3270 Keystroke Emulation loaded

Explanation: The 3270 keystroke emulation utility loaded successfully in this session.

User Response: None.

INDEM004 3270 keystroke emulation is already loaded

Explanation: You tried to load 3270 keystroke emulation in a session where it is already active.

User Response: None.

INDFT File Transfer Messages

INDFT001 File transfer command being processed

Explanation: This message appears when the file transfer command is entered, and processing by the system has begun.

User Response: None. Wait for message INDFT002 to appear.

INDFT002 Number of bytes of file transferred so far: = > xxxxxxxx

Explanation: This is a progress message that tells you how many bytes of the personal computer file have been transferred to or from the host. The number is updated as the file is transferred. After the entire file has been transferred, message INDFT003 appears.

User Response: None.

INDFT003 File transfer complete

Explanation: The file transfer operation has been completed successfully. There is now a file either at the host or at the personal computer whose name and characteristics are those you specified in the SEND or RECEIVE command.

User Response: None.

INDFT004 File transfer complete with records segmented

Explanation: The file transfer operation has been completed. Any record greater than the set logical record length (LRECL) of the file being appended will divide and become multiple records.

User Response: None.

INDFT005 Personal computer filespec incorrect: File transfer canceled

Explanation: You have entered some part of the personal computer DOS filespec incorrectly, for example, the diskette drive, path, filename, or extension.

User Response: Compare the personal computer DOS filespec in the file transfer command, which will still be visible in the personal computer session, with the user manual to make sure it conforms to the personal computer DOS requirements for a filespec. If the filespec is correct, it is possible that the specified personal computer file does not exist on the personal computer disk. Enter the DOS directory command, DIR, to check the personal computer filename and extension.

INDFT006 Command incomplete: File transfer canceled

Explanation: The user did not enter any parameters after Send or Receive.

User Response: Read the user manual on requirements for the SEND and RECEIVE commands and retry.

INDFT007 Cannot link to host: File transfer canceled

Explanation: This message indicates some kind of host connection problem.

User Response:

- If the host is not operational, retry the operation when the host is operating.
- If the host is operational, follow local procedures and have available data from “Message Error Steps” 1 (including the syntax of the file transfer command), 2a, 3, 4, 5, 6, 7, 8, and 9 on page 3-111.

INDFT**INDFT008 Command transmit error: File transfer canceled**

Explanation: This message occurs if there is a program error, or if a key was pressed that produced an invalid code, for example, one that cannot be transmitted to the host.

User Response: Retry the file transfer after carefully reading the instructions in the *User's Guide*.

- If the host is not operational, retry the operation when the host is operating.
- If the host is operational, follow local procedures and have available data from "Message Error Steps" 1 (including the syntax of the file transfer command), 2b, 3, 4, 5, 6, 7, 8, and 9 on page 3-111.

INDFT009 Error reading file from damaged personal computer disk: File transfer canceled

Explanation: This message indicates that the personal computer disk or diskette is probably damaged.

User Response: Retry the operation with a backup copy of the file being transferred. If the failure still occurs, refer to hardware problem determination information in your *Guide to Operations* and run a system checkout for either the diskette drive or fixed disk.

INDFT010 Host has not responded within timeout period: Refer to reference manual for more information

Explanation: The host has not responded to the file transfer within several seconds.

User Response: If the host session screen shows HOLDING, you can switch to the host session and press Clear (in VM/CMS) or PA2 (in TSO). This should start file transfer. If or appears in the host session screen operator information area, wait for it to clear. These indicate the system is working slowly. If you want to halt file transfer after several such time-out messages appear, switch to the host session, press Reset to clear the operator information area, and press PF2 to halt the file transfer, or Clear to continue. This situation can be caused by line problems. If IND\$FILE is not installed at the host, jump to the PC session and press Ctrl + Break to halt the file transfer.

INDFT011 Lost contact with host: File transfer canceled

Explanation: The host is inactive.

User Response:

- If there is an error code in the operator information area, copy it down and refer to "Host Communication Indicators" on page 2-21.
- If you do not receive an error code, follow local procedures and have the data available from "Message Error Steps" 1, 2c, 3, 4, 5, 6, 7, 8, and 9 on page 3-111.

INDFT**INDFT012 Error writing to damaged or full personal computer disk:
File transfer canceled**

Explanation: This message indicates that the personal computer disk or diskette has become full during a receive operation, or that the disk or diskette may be damaged.

User Response: Verify that the diskette you are using is not full. Retry the operation with a backup copy of the file being transferred. If the failure still occurs, refer to hardware problem determination information in the *Guide to Operations* and run a system checkout for either the diskette drive or fixed disk.

INDFT013 Error writing file to host: File transfer canceled

Explanation: The host program has detected an error in the file data being sent to it by the send program.

User Response: Retry the file transfer. If the message occurs again, follow your local procedures and have available a copy of the DOS file that caused the failure and the data from "Message Error Steps" 1 (including the SEND command), 4, 6, 7, 8, and 9 on page 3-111.

INDFT014 Error reading file from host: File transfer canceled

Explanation: The host program has detected an error in the file data during a receive operation.

User Response: Retry file transfer. If the message occurs again, follow your local procedures and have available a hexadecimal host dump, if possible, and the data from "Message Error Steps" 1 (including the RECEIVE command), 4, 6, 7, 8, and 9 on page 3-111.

INDFT015 Required host storage unavailable: File transfer canceled

Explanation: You need 30K of main storage for file transfer, in addition to that required by your host. This should not be confused with disk space.

User Response: Contact your local host system support representative.

INDFT016 Incorrect request code: File transfer canceled

Explanation: An invalid parameter has been sent by the sending or receiving application.

User Response: Verify that the current versions of SEND, RECEIVE, and the IND\$FILE module are correctly installed. If they are, follow local procedures and have available the message number and the data from "Message Error Steps" 1 and 4 on page 3-111.

INDFT017 Missing or incorrect TSO data set name: File transfer canceled

Explanation: The TSO data set name is missing or not a sequential or partitioned data set.

User Response: Correct the TSO data set name in the command and retry.

INDFT017 Missing or incorrect CMS file name: File transfer canceled

Explanation: The CMS file name is missing or incorrectly specified.

User Response: Correct the CMS file name in the command and retry.

INDFT

INDFT018 Incorrect option specified: File transfer canceled

Explanation: The user specified an option that is not acceptable.

User Response: Correct the command to specify an acceptable option and retry.

INDFT019 Error reading or writing to host disk: File transfer canceled

Explanation: There is not enough space available for data on the host.

User Response: Look at the host session message for indications and correct the problem.

INDFT022 Host session identifier incorrect: File transfer canceled

Explanation: The host session specified by the **Id** parameter in the file transfer command does not exist.

User Response: Determine which identifier you should be using by checking the host session identification using PF1 (list).

INDFT023 Activity specified not a host session: File transfer canceled

Explanation: The identifier (**id**) specified in the file transfer command is not for a host session.

User Response: Press PF1 (list) to identify the host windows. Reissue the file transfer command.

INDFT024 Autokey operation in progress: File transfer canceled

Explanation: Autokey is active.

User Response: Wait until the autokey operation is complete and retry.

INDFT025 Keyboard Inhibited: File transfer canceled

Explanation: The host session is not able to accept file transfer because the keyboard is locked.

User Response: Wait until the keyboard is free to receive, and then retry. If the problem persists, follow local procedures for reporting problems with the host.

INDFT026 Unrecoverable system error: File transfer canceled

Explanation: This message indicates a program error.

User Response: Follow local procedures and have available data from “Message Error Steps” 1, 2d, 3, 4, 5, 6, 7, 8, and 9 on page 3-111.

INDFT027 Communication sequence with host disrupted: File transfer canceled

Explanation: This indicates a program error or that Ctrl + Break (Ctrl + Pause on the Enhanced PC keyboard) has been pressed. This is a normal message when a file transfer is terminated by pressing the Ctrl + Break (or Ctrl + Pause) keys.

User Response: If you did not press the Ctrl + Break keys (Ctrl + Pause on the Enhanced PC keyboard), follow local procedures and have available data from “Message Error Steps” 1, 2c, 3, 4, 5, 6, 7, 8, and 9 on page 3-111.

INDFT028 Invalid option xxxxxxxx: File transfer canceled

Explanation: xxxxxxxx is not recognized, is specified as a positional keyword, or has an associated value that is incorrect.

User Response: Correct the option in the command and retry.

INDFT

- INDFT029 Invalid option xxxxxxxx with RECEIVE: File transfer canceled**
- Explanation:* xxxxxxxx is not valid with RECEIVE, but can be used with SEND.
- User Response:* Remove the option from the command and retry.
- INDFT030 Invalid option xxxxxxxx with APPEND: File transfer canceled**
- Explanation:* xxxxxxxx is not valid with APPEND, but otherwise can be used.
- User Response:* Remove the option from the command and retry.
- INDFT031 Invalid option xxxxxxxx without SPACE: File transfer canceled**
- Explanation:* xxxxxxxx can only be used if SPACE is also specified.
- User Response:* Remove the option from the command and retry.
- INDFT032 Invalid option xxxxxxxx with PDS: File transfer canceled**
- Explanation:* xxxxxxxx is invalid with a host partitioned data set.
- User Response:* Remove the option from the command and retry.

**INDFT033 Only one of TRACKS, CYLINDERS, AVBLOCK allowed:
File transfer canceled**

Explanation: SPACE can be specified in units of TRACKS, CYLINDERS, or AVBLOCK. Only one can be used.

User Response: Remove the unwanted option from the command and retry.

INDFT034 CMS file not found: File transfer canceled

Explanation: An existing CMS file must be specified for RECEIVE.

User Response: Correct the CMS file specification in the command and retry.

INDFT035 CMS disk is Read-Only: File transfer canceled

Explanation: The CMS file mode specified for SEND must allow write access.

User Response: Correct the CMS file specification in the command and retry.

INDFT036 CMS disk is not accessed: File transfer canceled

Explanation: The CMS file mode is not in the CMS disk search order.

User Response: Access the required disk in CMS or correct the CMS file specification in the command. Retry the command.

INDFT**INDFT037 CMS disk is full: File transfer canceled**

Explanation: Either the CMS disk is full, the maximum number of files (3400) on the minidisk has been reached, or the maximum number of data blocks (16,060) per file has been reached.

User Response: Use another disk with enough space or remove unwanted files from the specified disk. If the personal computer file is very large (over 1 M bytes), consider dividing it into several pieces. When one of these actions has been taken, retry the command.

INDFT038 System error - xxxx: File transfer canceled

Explanation: There is a system error. The variable information xxxx is a return code.

User Response: Refer to Chapter 4, "Return Codes" to help isolate the reason and correct the condition if possible.

INDFT099 Host program error code xx xxxxxxxx: File transfer canceled

Explanation: This message indicates a program error.

User Response: Follow your local procedures and have available the variable data xx xxxxxxxx from this message and the data from "Message Error Steps" 1 and 4 on page 3-111.

INDID Interchange Document Profile Messages

INDID001 IDP file creation is complete

Explanation: The IDP file creation is complete. It will appear after you have pressed Enter at the "Blind Carbon Copy" prompt screen.

User Response: None.

INDID002 Error opening personal computer file

Explanation: This message is displayed after an error trying to initialize the file. You will receive this message if you specified a file extension on the command line. If this is not the case, the personal computer disk or diskette may be damaged or full.

User Response: Be sure you did not specify a file extension. If you are writing to a diskette, retry the operation with another diskette. If you are writing to a fixed disk, try another directory. If the failure still occurs, refer to the *Guide To Operations* and run a system checkout of the diskette or fixed disk. If the retry operation was successful, be sure to copy your final form text file to the diskette or fixed disk that was used for the retry.

INDID**INDID003 Error writing to personal computer file**

Explanation: This message is displayed after an error trying to write the file. It indicates that the personal computer disk or diskette may be full or damaged.

User Response: If you are writing to a diskette, retry the operation with another diskette. If you are writing to a fixed disk, try another directory. If the failure still occurs, refer to the *Guide to Operations* and run a system checkout of the diskette or fixed disk. If the retry operation was successful, be sure to copy your final form text file to the diskette or fixed disk that was used for the retry.

INDID004 IDP file already exists

Explanation: The specified IDP file already exists on the diskette or fixed disk.

User Response: You have already created a IDP file. You may use that file for a file transfer or erase it and create another file.

INDID005 No file name was specified

Explanation: The file name was omitted.

User Response: Reissue the INDIDP command and include the file name.

INDID006 Specified file is not final form text

Explanation: The file you want to create an IDP file for is not a final form text file.

User Response: Enter the name of the final form text file you want to create an IDP file for.

INDKD Keyboard Definition Utility Messages

INDKD001 Complete operation before going to the exit panel.

Explanation: During a swap, copy, or retrieve operation, you selected a source key and then pressed End. You cannot have an operation in progress when you go to the Exit Panel.

User Response: Either complete the operation by selecting the target or reset the operation. (See the *3270 Workstation Program User's Guide and Reference*.) Then press End.

INDKD003 Failed to read xxxxxxxx.xxx

Explanation: An error occurred trying to read the file xxxxxxxx.xxx from the diskette.

User Response: Check that the correct diskette is in the active drive and that the drive door is closed. If the problem persists, make a new copy of the keyboard definition utility diskette and try again.

INDKD004 Failed to write xxxxxxxx.xxx

Explanation: An error occurred trying to write the file xxxxxxxx.xxx to the diskette.

User Response: Check that the active diskette is in the correct drive and that the drive door is closed. If the problem persists, make a new copy of the keyboard definition utility diskette and try again.

INDKD005 Incompatible target. Select a new target key

Explanation: You attempted an operation involving restricted and nonrestricted keys. A restricted key function cannot be placed on a nonrestricted key, and vice versa. The source key is still selected.

User Response: If the source key was restricted, then select a restricted target key. If the source key was not restricted, you must select a nonrestricted target or reset the operation. See the *3270 Workstation Program User's Guide and Reference*.

INDKD006 Failed to find xxxxxxxx.xxx

Explanation: The file xxxxxxxx.xxx was not found on the diskette.

User Response: Check to make sure your diskette is in the active drive, and that the file is on the diskette. Exit the program and check to see that the file is on the diskette. If not, copy the file from the original keyboard definition utility diskette and load the program again.

INDKD007 Select a function

Explanation: You completed a retrieve operation and then tried to select another target key.

User Response: Either select the retrieve operation again to go back to the retrieve table panel, or select another option.

INDKD009 Returning to Panel 1 cancels unsaved changes.

Explanation: You are trying to return to Panel 1 after having made changes on Panels 3.1 through 3.3 and not saving the changes.

User Response: If you are on the "Exit" panel and want to lose the changes, press the Home key again. Or, if you want to save the changes, go to the "Exit" panel and save (PF3) or file (PF4) the changes.

If you are on Panel 2 and you want to lose the changes, press PgUp again or PgDn to continue.

INDKD010 Complete operation before going to Panel 2.

Explanation: While doing a swap, copy, or retrieve operation, you selected the source key and then pressed PgUp. You cannot have an operation in progress when you go to Panel 2.

User Response: Either complete the operation by selecting the target, or reset the operation. Then press PgUp.

**INDKD101 Insert your R3.0 KDU diskette in the active drive
Press Enter to continue or enter Q to quit**

Explanation: The copy table utility (INDRCTAB) is prompting you to insert your Release 3.0 keyboard definition utility diskette.

User Response: Insert the keyboard definition utility diskette that you used when you modified your 3.0 keyboard layouts, or press Q to quit.

INDKD

- INDKD102 Insert your R1.0 KDU diskette in the active drive
Press Enter to continue or enter Q to quit**

Explanation: The copy table utility (INDRCTAB) is prompting you to insert your version 1.0 keyboard definition utility diskette.

User Response: Insert the 1.0 keyboard definition utility diskette that you received in the *3270 Workstation Program User's Guide* package, or press Q to quit.

- INDKD103 Copy the R1.0 file to your system diskette?
Enter Y for yes or N for no**

Explanation: The copy table utility (INDRCTAB) has copied the necessary file onto the version 1.0 keyboard definition utility diskette. You now have the option to copy this keyboard layout file onto your version 1.0 customized system diskette.

User Response: Press Y, then Enter to copy this keyboard layout onto your version 1.0 customized system diskette. Otherwise, press N, then Enter.

- INDKD104 Enter the drive name and path for your system diskette
or enter Q to quit**

Explanation: The copy table utility (INDRCTAB) is prompting you to enter information about where your customized system is located.

User Response: Enter only the drive name (that is, a:) if you did not use a path to store your customized system. The utility needs this information to locate the file named INDSKTM.COM. Enter the drive and path name for your customized system, or press Q to quit.

- INDKD105 Insert your R1.0 system diskette in drive x:
Press Enter to continue or enter Q to quit**

Explanation: While running the copy table utility (INDRCTAB), you requested that the modified keyboard layout be copied onto your customized system diskette. You are now being prompted to insert that diskette.

User Response: Insert the customized system diskette and press Enter, or press Q to quit.

- INDKD106 Failed to find xxxxxxxx.xxx
(You will also receive message INDKD101, INDKD102, or INDKD103 with this one.)**

Explanation: The file with the variable name xxxxxxxx.xxx could not be found. The diskette you are using may be damaged.

User Response: Try the operation again using a back-up copy of the diskette.

- INDKD107 Failed to read xxxxxxxx.xxx
(You will also receive message INDKD101, INDKD102, or INDKD103 with this one.)**

Explanation: An error has been detected during an attempt to read the file with the variable name xxxxxxxx.xxx. The diskette you are using may be damaged.

User Response: Try the operation again using a back-up copy of the diskette.

INDKD

INDKD108 Failed to write xxxxxxxx.xxx
(You will also receive message INDKD101, INDKD102, or
INDKD103 with this one.)

Explanation: An error has been detected during an attempt to write the file with the variable name xxxxxxxx.xx. The diskette you are using may be damaged.

User Response: Try the operation again using a back-up copy of the diskette.

INDPA Patch Installation Messages

There may be times when DOS messages appear, in addition to patch messages, while you are using the patch facility. If this happens, refer to your *IBM Personal Computer Disk Operating System* manual for explanations.

INDPA001 Empty patch file

Explanation: Data was not found in the patch file specified.

User Response: Add the patch information to the failing patch file.

INDPA002 Zap data not specified

Explanation: Zap data was not found in the patch file specified.

User Response: Add the zap information to the failing patch file. Make sure you press the New Line key or Enter after every entry in the patch file. See "Creating a Patch File" on page 5-5 for further information.

INDPA003 Prerequisite system level not specified

Explanation: The first entry in the patch file is a required system level, and none was found.

User Response: Add the system level as the first entry in the failing patch file.

- INDPA004 Current - system level = (xxxx)
But patch prerequisite is - system level = (xxxx)**

Explanation: The first entry in the patch file specified a prerequisite APAR level of xxxx, but the system is currently at a system level of xxxx.

User Response: Either upgrade the system level or correct the patch file, whichever caused the failure.

- INDPA005 Requested APAR (xxxxxxxx) already installed**

Explanation: The APAR number specified is already installed on the system.

User Response: Verify that you typed in the correct APAR number. If you did, then the patch is already installed and no further action is needed. If you typed an incorrect APAR number, correct and retry.

- INDPA006 Requested APAR (xxxxxxxx) not installed**

Explanation: You have tried to remove an APAR that is not on the system, or you entered the wrong APAR number.

User Response: If you typed the number correctly, the APAR has been removed, and no further action is needed.

- INDPA007 Prerequisite APAR (xxxxxxxx) not installed**

Explanation: The APAR number specified a prerequisite APAR of xxxxxxxx, but that APAR is not currently installed on the system.

User Response: Verify that the prerequisite APAR entry in the patch file is correct. If it is, install the required prerequisite APAR and retry the operation.

INDPA008 INDQPCH.DAT history file not found on this diskette

Explanation: Either one of these conditions is true:

- The diskette you are attempting to patch is not a customized workstation program diskette.
- The INDQPCH.DAT history file has been deleted or is not on the diskette, the disk, or the subdirectory the patch is in.

User Response: According to the condition, take one of these actions:

- Place the workstation program diskette in the default drive.
- If the history file INDQPCH has been deleted from the diskette, use the most current backup of your system diskette and install any fixes required to bring the system up to the current level.

INDPA009 Maximum APARs installed

Explanation: The system allows a maximum of 100 APARs to be installed for a given refresh level.

User Response: Upgrade your system to the most current refresh level.

INDPA010 Patch file for APAR (xxxxxx) not found

Explanation: The APAR number was not found. This error can be caused by one of the following:

- Entering an incorrect APAR number
- Failing to specify the diskette drive identifier if the APAR file is on a diskette drive other than the current default drive
- The patch file is not on the diskette.

User Response: Either enter the correct APAR number, or specify the diskette drive identifier if the APAR file is on a diskette drive other than the current default drive.

INDPA011 OFFset invalid or missing

Explanation: The **OFF=** keyword in the zap data of the patch file was either missing or misspelled.

User Response: Correct the zap data and retry the operation.

INDPA012 VERify invalid or missing

Explanation: The **VER=** keyword in the zap data of the patch file was either missing or misspelled.

User Response: Correct the zap data and retry the operation.

INDPA013 REPlace invalid or missing

Explanation: The **REP=** keyword in the zap data of the patch file was either missing or misspelled.

User Response: Correct the zap data and retry the operation.

INDPA014 Invalid hex offset data

Explanation: The offset data in the zap line either contained nonhexadecimal data or was missing.

User Response: Correct the zap data and retry the operation.

INDPA015 Invalid hex verify data

Explanation: The verify data in the zap line either contained nonhexadecimal data or was missing.

User Response: Correct the zap data and retry the operation.

INDPA016 Invalid hex replace data

Explanation: The replace data in the zap line either contained nonhexadecimal data or was missing. You may see **Verify is correct** before getting this message. This indicates that only the replace data is incorrect.

User Response: Correct the zap data and retry the operation.

INDPA017 Comma or parenthesis missing

Explanation: You have more than 8 characters in the verify or replace data line, or you have a required delimiter missing from the displayed zap line. You must have left and right parentheses and two commas in the zap line.

User Response: Correct the zap data and retry.

**INDPA020 PATCH =ZAP xxxx (OFF =xxxx,VER =xxxx,REP =xxxx)
module not found**

Explanation: The module specified in the zap data was not found during patch data verification.

User Response:

- If the zap data is incorrect, correct the data and retry the operation.
- If the data is correct, determine why the module was not found. There may be:
 - An incorrect diskette drive specifier, or
 - A deleted module. If a module has been deleted, use a backup copy and retry the operation.

**INDPA021 PATCH =ZAP xxxx (OFF =xxxx,VER =xxxx,REP =xxxx)
mismatch**

MODULE = MOD =xx

Explanation: The verify data specified in the zap data line does not match the verify data in the module when you are installing patches.

User Response: If the zap data is incorrect, correct the data and retry the operation. If the data is correct, record all data related to the problem. Follow local procedures and have available a screen print and a copy of the diskette.

INDPA022 PATCH = ZAP xxxx (OFF = xxxx,VER = xxxx,REP = xxxx)
mismatch

MODULE = MOD = xx

Explanation: The verify data specified in the zap data line does not match the verify data in the module when you are removing patches.

User Response: The zap data file for this patch has been changed since the APAR was installed. Correct the data file and retry the operation.

INDPA023 Prerequisite APAR invalid or not specified

Explanation: One of the keywords, **PRE** or **APAR**, is misspelled or missing on one of the APAR prerequisite entries.

User Response: Correct the keyword data and retry the operation.

INDPA024 Error in zap data - patches not installed

Explanation: An error in the zap data was encountered. Preceding error messages identified the type of error. This message always appears with another message.

User Response: Correct the problem identified by all preceding messages and retry.

INDPA025 Error in zap data - patches not removed

Explanation: An error in the zap data was encountered. A preceding error message identified the type of error. This message always appears with another message.

User Response: Correct the problem identified by all preceding messages and retry.

INDPA026 Patches installed

Explanation: The patch was installed, and the history file INDQPCH.DAT was updated.

User Response: None.

INDPA027 Patches removed

Explanation: The patch was removed, and the history file INDQPCH.DAT was updated.

User Response: None.

INDPA028 Incorrect data entered. Retype

Explanation: You entered invalid data for check sum, the prompt preceding it, or both.

User Response: Enter the data for the prompt and check sum. If the problem persists, refer to "Patch Problem Determination" on page 2-53.

INDPA029 Patch file creation canceled

Explanation: You have terminated the patch file creation procedure either by:

- Replying **No** to message INDPA30 or
- Pressing Enter in response to:
 - The APAR number prompt, or
 - The prerequisite system level, or
 - The first occurrence of the prompt for
 - The module name, or
 - OFFset, or
 - VERify, or
 - REPlace.

User Response: If you want to create a patch, enter the command INDPATCH.

**INDPA030 Patch file for APAR xxxxxxx already exists
Do you want to overlay this file <Y> es or <N> o?**

Explanation: The APAR number you entered in response to the APAR number prompt already exists.

User Response:

- If you reply **Y**, the patch process continues.
- If you reply **N**, message INDPA029 appears, and the patch file creation is canceled.

INDPA031 Patch file for APAR xxxxxxx created

Explanation: This is an informational message.

User Response: None.

INDSM Split/Merge Messages

INDSM001 Command being processed

Explanation: This is an information message.

User Response: None.

INDSM002 Incorrect level of 3270 Workstation Program

Explanation: The SPLIT and MERGE commands require you to use Version 2.0 or higher of the control program or Version 1.0 of the workstation program.

User Response: Load the correct version of the control program or workstation program.

INDSM003 System not customized for multiple DOS function

Explanation: SPLIT and MERGE require multiple DOS function. Your system is not customized for this function.

User Response: Your system must be recustomized to include the multiple DOS function.

INDSM004 A required system resource is busy. Try again later

Explanation: The DOS environment resource manager is currently being used by another program. For example, there is a SPLIT or MERGE command being processed.

User Response: Issue the command again. If the condition persists, contact your service coordinator or IBM dealer.

INDSM005 Source window x does not exist

Explanation: The source window, x, specified in the SPLIT or MERGE command does not exist.

User Response: Press PF1 (list) in work station control mode to see what windows exist. Change the entry in the panel.

INDSM006 Source window x is not a DOS window

Explanation: The source window exists, but it is not a personal computer DOS window.

User Response: Specify a personal computer DOS window.

INDSM007 Specify a source window

Explanation: You did not enter any source windows.

User Response: Enter one or more source windows.

INDSM008 Specify a target window

Explanation: You did not enter any target windows.

User Response: Enter one or more target windows.

INDSM009 Specified windows must be contiguous in memory

Explanation: The windows you specified to merge must be in consecutive blocks of storage.

User Response: Issue the INDDENV command. Environments are displayed contiguously from high to low storage. For more information on the INDDENV command, refer to the *User's Guide*.

INDSM010 Not enough storage to create target windows

Explanation: There is not enough storage allocated to create all the target windows. Each window must have at least 10K of storage, but the total cannot exceed the size of the source window.

User Response: Choose smaller storage requirements for each window, or choose fewer windows. Run INDDENV to see how much storage the source window has. For more information on the INDDENV command, refer to the *User's Guide*.

INDSM011 Target window x already exists

Explanation: Since the target window exists, it cannot be created again.

User Response: Either specify the target as a source window also, or choose another target window.

**INDSM012 Application running in source window.
Press PF3 to continue or any other key to cancel**

Explanation: You have an application running in a source window that you want to merge or split. If you merge or split that window, you will immediately terminate the application that is running.

User Response: Check to see what application is running in the source window. If you decide to split or merge that window, press PF3. Otherwise, choose another source window.

INDSM013 Default drive for window x is higher than highest drive

Explanation: In order to access the default drive, it must be less than or equal to the highest drive.

User Response: Choose a valid drive name less than or equal to the highest drive.

INDSM014 Drive name must be a letter A–F

Explanation: Drive name must be an alphabetic character, A through F.

User Response: Choose a valid drive name.

INDSM015 Defaults will be used for blank fields.

Press PF3 to continue or any other key to cancel

Explanation: You have omitted some fields.

User Response: Press PF3 to accept the defaults, or press any other key to enter values in the field.

INDSM016 System error - xxxx

Explanation: The split or merge program cannot recover from an error it encountered. This error is identified by the return code xxxx.

User Response: Refer to Chapter 4, “Return Codes” on page 4-1 to locate the explanation for the return code, help isolate the cause of the error, and correct the condition if possible.

INDSM017 At least 10K of storage must be allocated for each window

Explanation: You entered a value smaller than 10K for one or more target windows.

User Response: Enter the storage size with a value of at least 10K.

INDSM018 Specify each source window only once**INDSM019 Specify each target window only once**

Explanation: You specified a window as a source or target window more than once.

User Response: Remove the redundant window name.

INDSM

INDSM020 You cannot delete characters from this area

Explanation: The cursor is not on an input field.

User Response: None.

INDSM021 Only numbers are allowed in this field

Explanation: You can enter only numbers 0 through 9 for the value of this field.

User Response: Correct the value in the field.

INDSM022 You cannot type in that area

Explanation: You have tried to type on a panel in a place where it is not valid to do so.

User Response: Move the cursor to an input field and continue your work.

INDSM023 Window short name must be a letter A–Z

Explanation: You can enter only a letter A through Z for the value of this field.

User Response: Correct the value in the field.

INDSM024 Window long name must contain only A–Z or 0–9

Explanation: The only valid characters are A through Z and 0 through 9.

User Response: Correct the value in the field.

INDSM025 A short name is required for each target window requested

Explanation: You must enter a window short name for each window you want to create.

User Response: Enter window short name(s) on the "Home" panel for each window you want to create.

INDSM026 INDSPLIT and INDMERGE not allowed with XMA card

Explanation: You attempted to do a split or merge, and you are using the XMA card. INDSPLIT and INDMERGE will not function with the XMA card.

User Response: Use the INDDENV command to display the amount of storage you have available in each PC session. If this storage size is not suitable, you must recustomize.

INDSM027 Maximum number of windows reached. Cannot do SPLIT

Explanation: You attempted to do a split that would have yielded a total of more than six PC sessions.

User Response: Use the INDDENV command to display the number of PC windows you can create.

INDSP System/Program Information File Messages

INDSP001 You cannot type in that area

Explanation: You have tried to type on a panel in a place where it is not valid to do so, for example, a selectable field.

User Response: To type on a panel, position the cursor on an input field. If the cursor is on a selectable field, press PF2 to select the option.

INDSP002 Cursor is not on a selectable field

Explanation: You pressed PF2 on a panel where it is not valid to do so, for example, an input field.

User Response: Position the cursor on a selectable field, then press PF2 to select an option. If the cursor is on an input field, type the information.

INDSP003 You cannot delete characters from this area

Explanation: The cursor is not on an input field.

User Response: None.

INDSP004 Only A–F and 0–9 are allowed in this field

Explanation: Only hexadecimal values are allowed in this field. The only valid characters are 0 through 9 and A through F.

User Response: Correct the value in the field.

INDSP005 Contents of file are unusable

Explanation: The contents of the file are in an unexpected and unusable format.

User Response: Make sure your file is a system information file or a program information file.

INDSP006 Directory cannot be found

Explanation: The directory does not exist on the disk or diskette.

User Response: Use the TREE command to check your disk or diskette to see if the directory exists. See the *IBM Personal Computer Disk Operating System* manual for further explanations of path and file specifications.

INDSP007 Cannot access directory

Explanation: This message appears if:

- The directory is full.
- The directory does not exist.
- There is a write-protected tab on the diskette.

User Response:

- Enter either the DIR or CHKDSK DOS directory commands to check directory status.
- Use the TREE command to see if the directory exists on your disk or diskette. See the *IBM Personal Computer Disk Operating System* manual for further explanations of path and file specifications.
- Check the diskette for the write-protected tab.

INDSP**INDSP008 Failed to write file**

Explanation: Your diskette may not be formatted correctly, or it may be full.

User Response: Make sure the diskette is formatted correctly. If it is, use the CHKDSK command to see how much space is left on the diskette. See the *IBM Personal Computer Disk Operating System* manual for further explanations of path and file specifications.

INDSP009 Only numbers are allowed in this field

Explanation: You must enter only numbers in this field.

User Response: Correct the value in the field.

INDSP010 Enter program name

Explanation: You must enter a program name before you leave a panel.

User Response: Enter the program name.

INDSP011 DOS must be version 2.10 or higher

Explanation: You are using a version of DOS that is too low.

User Response: Try again with the correct version of DOS.

INDSP012 File not found

Explanation: The system information file or the program information file you tried to read does not exist.

User Response: Correct the program name or directory. Press PF2 to create a new system information file or Press PF4 to create a new program information file.

INDSP013 Entry not found In the consolidated PIF

Explanation: The program name you entered does not have a PIF in the consolidated program information file.

User Response: Make sure the program has an associated PIF. If not, press PF4 to create a program information file.

INDSP014 Press PF7 again to confirm or any other key to cancel

Explanation: Informational.

User Response: Either press PF7 to delete the entry, or press any other key to cancel this operation.

INDSP015 Entry deleted

Explanation: Informational. You have deleted the entry.

User Response: None.

INDSP016 File written

Explanation: Informational. You have created the appropriate file.

User Response: None.

INDSR Save/Restore Messages

INDSR001 Save command being processed

Explanation: Information message.

User Response: None.

INDSR002 Restore command being processed

Explanation: Information message.

User Response: None.

INDSR003 Autokey information saved successfully

Explanation: Information message.

User Response: None.

INDSR004 xxxxxxxx information restored from xx/xx/xx at xx:xx

Explanation: Information message. The information for the first variable is one of the following:

- Autokey
- Screen
- Notepad

The second variable contains the date when the information was saved. The third variable contains the time the information was saved. It is suggested you always set the time and date before doing a save, or the last default date and time that was set will be used.

User Response: None.

INDSR005 Notepad information saved successfully

Explanation: Information message.

User Response: None.

INDSR006 Screen profiles saved successfully

Explanation: Information message.

User Response: None.

INDSR007 Save processing complete

Explanation: Information message.

User Response: None.

INDSR008 Restore processing complete

Explanation: Information message.

User Response: None.

INDSR011 Error opening xxxxxxx personal computer file

Explanation: The file specified (or the default file) could not be opened. xxxxxxxx refers to one of the specific types of personal computer files:

- **Autokey**
- **Notepad**
- **Screen**

User Response: If you specified a filespec on the command, check to be sure that it was specified correctly. Make sure the drive door is closed. Enter the DOS directory command, DIR, to check the personal computer filename and extension.

Note: The INDSAVE and INDRSTR commands each accept one of four keywords:

- **AUTOKEY**
- **NOTEPAD**
- **SCREEN**
- **NOTEPADN**

If the command is not followed by one of the above keywords, filespec is the assumed parameter. Make sure you typed these keywords correctly. Make sure the directory or sub-directory you are attempting to restore from has the file residing there. If you find no error in your procedures, follow your local procedures and have the message number available and the data from "Message Error Steps" 1 and 4 on page 3-111.

INDSR012 Error creating personal computer file

Explanation: The personal computer file could not be created.

User Response: Check the filespec specified. If you named a path, make sure the path exists. Be sure that the diskette drive door is closed. If the failure persists, refer to "Save and Restore Problem Determination" on page 2-61 to isolate the cause of the failure.

INDSR013 Error reading from personal computer file

Explanation: A read request failed to complete processing successfully. This message may indicate a program error.

User Response: Be sure the drive door is closed. If the drive door is closed and the failure persists, refer to "Save and Restore Problem Determination" on page 2-61 to isolate the cause of the failure.

INDSR014 Error writing to personal computer file

Explanation: A write request failed to complete processing successfully.

User Response: The most probable cause for this message is that the disk is full. Check the number of bytes available on the current disk. Retry the operation when you have made more space available.

INDSR015 Personal computer filespec incorrect

Explanation: The path, drive, or filename specified in the filespec is incorrect.

User Response: Retry the operation, specifying a valid path, drive, or filename. See the *IBM Personal Computer Disk Operating System* manual for further information.

INDSR

INDSR016 Personal computer storage insufficient for processing

Explanation: Not enough system storage is currently available for the save/restore function to process the request.

User Response: You need to obtain more storage for the save/restore function to process the request. Retry the request in a larger PC session, or recustomize your system for a larger PC session.

INDSR017 Invalid file specified for Restore

Explanation: Either the file specified on the INDRSTR command is not a previously saved file for the request type specified, or system storage has been overlaid.

User Response: Check to be sure that the file being used on the INDRSTR command is a previously saved file for the request type that is being stored. If no error can be found in your procedures, follow local procedures and have available the message number, error code and data from "Message Error Steps" 1 and 4 on page 3-111.

INDSR018 Not all notepads that were saved could be restored

Explanation: This is an informational message only, which indicates that there are fewer notepads defined on the current system than there were on the saved system.

User Response: None. The restore will complete processing successfully with as many notepads as are defined on the current system being restored and the remaining will be disregarded.

INDSR019 One notepad restored. No saved data for the other

Explanation: Your system was configured for one notepad. Thus, only one notepad was saved and restored.

User Response: None.

INDSR020 Window configuration error

Explanation: During a restore request for the screen profile, a configuration error was detected. The saved window configuration differs from the current system configuration in one or more of the following ways on screen profile 0:

1. The window counts do not match.
2. The window short name was not found in current system.

In addition, the matching windows must be identical in type, presentation space size (rows and columns), features, and session IDs, when the screen profile was created on a Release 3.0 or 4.0 system.

User Response: Screen profiles can be restored only on systems configured with the same windows defined on screen profile 0. Your host session status (connected or not connected) should be set before you save screens. Otherwise, the session will assume the default host characteristics. If the host status changes before you restore your screens, there will be a window mismatch and you will receive this message.

INDSR022 Autokey in use. Cannot Save/Restore Autokey

Explanation: The save or restore request failed because an autokey operation was in progress.

User Response: Wait for the autokey operation to complete processing and retry. If the other operation does not complete, refer to “Save and Restore Problem Determination” on page 2-61 to isolate the problem.

INDSR023 Copy not customized. Cannot Save/Restore notepads

Explanation: The commands INDSAVE and INDRSTR use the copy function to save and restore notepads. Your system is not customized for the copy function.

User Response: If you want to save and restore notepads, your system must be recustomized. Refer to the customization section of the *User’s Guide*.

INDSR024 Incorrect window name for single notepad requests

Explanation: The window name specified on a single notepad request or restore must be a notepad window.

User Response: Reissue the command, specifying a valid notepad window name for the current system configuration.

INDSR025 Filespec must be specified on single notepad requests

Explanation: You omitted the filespec in entering an INDSAVE or INDRSTR command.

User Response: Reissue the command, specifying the filespec as the second parameter.

INDSR026 Filenames specified in the file record are invalid

Explanation: The save or restore request failed because your user-specified file contained invalid filespec information.

User Response: Specify a filename containing valid filespec information and retry the operation.

INDSR031 System error while processing xxxxxxxx - xxxx

Explanation:

- If INDSAVE or INDRSTR appears as the first variable, a system error occurred while the program was being initialized, or while the counter or save options were running.
- If AUTOKEY, NOTEPAD, or SCREEN appears as the first variable, your system was not properly customized to perform that particular operation.

The second variable in the message is a return code.

User Response: Refer to Chapter 4, "Return Codes" to locate an explanation and user response for the return code. If your system was not properly customized to perform that operation, refer to the Customization section of the *User's Guide*.

INDSR032 Autokey restore failed: Saved autokey recording does not fit

Explanation: The size of the recording is greater than the size of the autokey recording area of the system. The autokey restore operation is canceled, and the contents of the recording area are not changed.

User Response: Increase your autokey recording area by recustomizing the workstation program.

INDSR

INDSR033 xxxxxxxx not customized. No data saved

Explanation: If NOTEPAD or AUTOKEY appears as the variable, your system is not customized for notepads or the autokey function. A file was still created and should not be erased.

User Response: None.

INDSR034 No xxxxxxxx data available to be restored

Explanation: The system for which the INDSAVE was performed was not customized for either AUTOKEY or NOTEPAD. Since no data had been saved, none was restored.

User Response: None.

INDSR035 xxxxxxxx not customized. No data restored

Explanation: If NOTEPAD or AUTOKEY appears as the variable, your system is not customized for notepads or the autokey function. No data was restored.

User Response: None.

INDST Startup Messages

INDST001 Failed to find xxxxxxxx.xxx

Explanation: The file xxxxxxxx.xxx cannot be found on the diskette or hard disk containing your customized system.

User Response: Issue the Directory (DIR) command for the system diskette or hard disk directory or subdirectory from which you are attempting to IPL the system. If the file named in the INDST001 message is listed in the directory, you have a bad system diskette or hard disk. Use a backup copy, follow your local procedures and have available the file name in message INDST001 and data from "Message Error Steps" 1 and 10 on page 3-111.

INDST002 Insufficient storage to initialize system

Explanation: The PC work station does not have enough storage to initialize your customized system.

User Response: Refer to "System Startup Problem Determination" on page 2-63 to isolate the cause of the failure.

INDST003 Contents of file xxxxxxxx.xxx are unusable

Explanation: The file xxxxxxxx.xxx mentioned is in an unusable or unexpected format. Either the file has been damaged, or it is not an IBM file.

User Response: If the file is an IBM file, replace the system diskette with a backup diskette, or repeat the customization procedure and retry the startup. If the operation is still unsuccessful, follow your local procedures and have available the file name in message INDST003 and data from "Message Error Steps" 1 and 10 on page 3-111.

- INDST004 System extension xxxxxxxx.xxx unable to initialize:
xxxx. Press D to take a dump or any other key to continue**

Explanation: The system extension xxxxxxxx.xxx was unable to initialize. The reason for this failure is specified in the return code xxxx.

User Response: You may be able to continue using your system without the system extension mentioned. Press any key to continue. Refer to Chapter 4, "Return Codes" on page 4-1 with the return code that appeared in the INDST004 message, and see if the problem can be corrected by the suggested action. If the problem persists, follow your local procedures and have available the system extension name, the return code in the message, and the data from "Message Error Steps" 1 and 10 on page 3-111.

- INDST005 Block number 'xxxxxx'X on the XMA card is unusable
Press any key to continue**

Explanation: During initialization of the XMA card, correct operation of each 4K block of memory is tested. A parity check has occurred at address 'xxxxxx'X on the XMA card.

User Response: You can either press any key to continue initialization, or run the diagnostic programs.

- INDST006 XMA card in use
Unable to load the 3270 Workstation Program**

Explanation: Some other program is already using the XMA card. The workstation program will not be loaded.

User Response: If you want to load the workstation program, you must turn the system unit off and on again.

INDST007 Your system is not customized for this unit. Unable to load the 3270 Workstation Program.

Explanation: There are three types of system units you can customize for: AT, XT, and 3270 PC. You are trying to load the workstation program on a machine that is different than the one you customized for.

User Response: Either recustomize your system unit to fit the hardware you are using, or run the workstation program on the specified hardware. To see which system unit you have customized for, either refer to your completed customization worksheet or look in the INDCFIG.FIL file.

INDST008 Starting XMA storage check...

Explanation: The workstation program is verifying the storage on the XMA card. This message will be followed by message INDST009 when the storage check is complete.

User Response: None.

INDST009 XMA storage check complete

Explanation: The workstation program has verified the storage on the XMA card.

User Response: None.

INDSY System Error Messages

- INDSY001 Unrecoverable system error - xxxxxxxx**
Press D to take a dump or any other key to re-IPL
- Explanation:* The workstation program has encountered an error that it cannot recover from. The variable data xxxxxxxx is used in the problem determination process.
- User Response:* Record the variable data in the message, including the hexadecimal return code and refer to Chapter 4, "Return Codes."
- INDSY002 Component error - xxxxxxxx**
Press D to take a dump or any other key to continue
- Explanation:* One of the components in the workstation program has had an unrecoverable error. The variable data xxxxxxxx is used in the problem determination process.
- User Response:* Record the variable data in the message including the hexadecimal return code. Press D to take a dump or press any other key to continue. Refer to Chapter 4, "Return Codes" on page 4-1.
- INDSY003 Component information - xxxxxxxx**
Press any key to continue
- Explanation:* One of the components has encountered a recoverable error.
- User Response:* Record the return code in the message and refer to Chapter 4, "Return Codes" on page 4-1.

**INDSY007 Insert diskette DUMPDATA.00x
Press any key to continue or Q to quit**

Explanation: The variable data x is the diskette labeled 1, 2, or 3 that you created using INDPREP.

User Response: Insert the diskette and press any key to continue the dump process. If you press Q to quit the process, message INDSY013 appears.

**INDSY008 Incorrect diskette. Insert diskette DUMPDATA.00x
Press any key to continue or Q to quit**

Explanation: You inserted the incorrect diskette.

User Response: Make sure that the diskette is blank and formatted. This should be generated by the INDPREP command. Insert the correct diskette and press any key to continue the dump process. If you press Q to quit the process, message INDSY013 appears.

**INDSY009 Parity check 1 in segment xxxx:
Power off and run diagnostics**

Explanation: There has been a parity check on the main system board. Segment xxxx is the starting segment address of the 16K block of storage containing the parity check. If xxxx equals FFFF, the storage location where the parity check occurred could not be found.

User Response: Try to log off the host computer sessions. Then run the diagnostic programs to isolate the problem.

INDSY

INDSY010 . **Parity check 2 in segment xxxx: Power off and run diagnostics**

Explanation: There has been a parity check on an expansion board. Segment xxxx is the starting segment address of the 16K block of storage containing the parity check. If xxxx equals FFFF, the storage location could not be found.

User Response: Try to log off the host computer sessions. Then run the diagnostic programs to isolate the problem.

INDSY011 **Dumping....**

Explanation: The workstation program is writing the contents of storage onto the diskette.

User Response: None.

INDSY012 **Dump complete. Insert system diskette Press any key to re-IPL**

Explanation: The dump process has completed. The system is in a Halt state.

User Response: Insert your customized system diskette and press any key to reload your workstation program.

INDSY013 **Dump canceled. Insert system diskette Press any key to re-IPL**

Explanation: You have canceled the dump process in response to a preceding message.

User Response: Insert your customized system diskette and press any key to reload your workstation program.

**INDSY014 Warning: The needed graphics adapter is not attached
Insert DOS diskette and press any key to continue**

Explanation: You do not have a graphics adapter attached and you tried to use a personal computer graphics application.

User Response: If this message appears and you do not have a graphics adapter, insert DOS diskette and press any key. You will re-IPL only the PC session you were attempting to run a graphics application in.

If this message appears and you **do** have a graphics adapter, refer to hardware problem determination information in the *Guide to Operations* and perform the checkout procedure for the adapter. If you find no hardware problem, follow your local procedures and have available the hardware configuration (including model numbers, installed cards, and storage size), and the data from "Message Error Steps" 1 and 4 on page 3-111.

INDSY

INDSY015 Diskette error. Insert system diskette Press any key to re-IPL

Explanation: An error was encountered with the diskette when taking a dump, and the dump process was canceled. The error could be one the following:

1. The diskette drive door is not closed, or there is no diskette in the drive
2. The diskette is defective
3. The diskette drive is defective

User Response: Insert the system diskette, close the drive door, and press any key to re-IPL.

- If you are able to re-IPL, you probably have a defective dump diskette: use another formatted dump diskette before starting the dump procedures.
- If you are unable to re-IPL, you probably have a defective diskette drive.

If you are not sure whether the drive is defective, see diskette diagnostics in the *Guide to Operations*.

INDSY017 Parity check in block at address 'xxx000'X on XMA card

Explanation: There has been a parity check on the XMA card at block address 'xxx000'X. If xxx equals FFF, the storage location could not be found.

User Response: Try to log off the host computer sessions. Then run the diagnostic programs to isolate the problem.

**INDSY018 Graphics application running in another PC window
Insert DOS diskette and press any key to continue**

Explanation: You attempted to run a graphics application while you have one already running in another PC window.

User Response: If this message appears and you do not have a graphics adapter, insert the DOS diskette and press any key. You will re-IPL only the PC session you were attempting to run a graphics application in. If you wish to run this application, you must first stop the other PC graphics application.

**INDSY050 DOS error for PC session in window x
Abort, Fail, or Retry**

Explanation: This message can appear with messages INDSY053 through INDSY060. The variable information **x** is the personal computer window short name where the DOS error appears. Respond to the associated message first.

User Response:

- Type **A** to terminate the application through an INT X'23'.
- Type **F** to fail the DOS function call that caused the error. The program may continue running.
- Type **R** to try the application again.

**INDSY051 DOS error for workstation program
Abort, Fail, or Retry**

Explanation: This message can appear with messages INDSY053 through INDSY060. The workstation program issued a DOS function call that encountered an error. Respond to the associated message first.

User Response:

- Type **A** to terminate the application through an INT X'23'.
- Type **F** to fail the DOS function call that caused the error. The program may continue running.
- Type **R** to try the application again.

**INDSY052 DOS error for a system extension
Abort, Fail, or Retry**

Explanation: This message can appear with messages INDSY053 through INDSY060. A system extension issued a DOS function call that encountered an error. Respond to the associated message first.

User Response:

- Type **A** to terminate the application through an INT X'23'.
- Type **F** to fail the DOS function call that caused the error. The program may continue running.
- Type **R** to try the application again.

INDSY053 Attempt to write on write-protected diskette in drive x

Explanation: You attempted to write on a write-protected diskette.

User Response: Use a diskette that is not write-protected, or remove the write-protected tab from your diskette.

INDSY054 Drive x not ready

Explanation: The drive is not ready. This may be due to:

- No diskette in the drive
- The door being open
- The diskette not being properly loaded.

User Response: Properly load the diskette and close the drive door.

INDSY055 Data error on drive x

Explanation: Your diskette is probably damaged.

User Response: Try the operation again. If the problem persists, use another diskette.

INDSY056 Sector not found on drive x

Explanation: Your diskette is probably damaged.

User Response: Try the operation again. If the problem persists, use another diskette.

INDSY057 Printer out of paper

Explanation: Your printer is out of paper.

User Response: Add more paper.

INDSY058 Write failure on drive: x

Explanation: A problem occurred while writing. The variable x may be the disk drive identifier such as a: or b:. If a question mark appears, the failure was on a device other than a disk drive.

User Response: Check any device you are attempting to use.

INDSY**INDSY059 Read failure on drive: x**

Explanation: A problem occurred while reading. The variable x may be the disk drive identifier such as a: or b:. If a question mark appears, the failure was on a device other than a disk drive.

User Response: Check any device you are attempting to use.

INDSY060 General failure on drive: x

Explanation: A problem occurred while using a device. The variable x may be the disk drive identifier such as a: or b:.

User Response: Check any device you are attempting to use.

INDSY062 Cannot load COMMAND.COM. PC session inactive

Explanation: COMMAND.COM is not in the active drive for the active PC session.

User Response: Insert the DOS diskette and re-IPL your PC session.

**INDSY063 DOS inaccessible. Check all PC sessions
Press any key to continue**

Explanation: The Multi-DOS system may be locked due to a critical error such as attempting to write on a write-protected diskette or having a drive door open. Thus, a DOS error has occurred in a personal computer session.

User Response: Check all personal computer sessions and correct the error. Press any key to continue.

INDSY064 **xxxxxxxx.xxx not found. Insert diskette with this file**
Press R to retry or A to abort

Explanation: While IPLing your system, this file was not found on the system diskette that was currently in the drive.

User Response: Insert the other system diskette that contains the file, and press R to retry the operation. Otherwise, press A to end the operation.

INDSY065 **Insert diskette for drive a**
Press any key to continue

Explanation: The procedure you are running uses two diskettes. You are prompted to insert the diskette for drive **a**.

User Response: Insert the diskette you are using for drive **a**, and press any key to continue.

INDSY066 **Insert diskette for drive b**
Press any key to continue

Explanation: The procedure you are running uses two diskettes. You are prompted to insert the diskette for drive **b**.

User Response: Insert the diskette you are using for drive **b**, and press any key to continue.

INDSY101 **System error - xxxx**
Press any key to continue

Explanation: This error occurs while the system is loading the workstation program.

User Response: Refer to Chapter 4, "Return Codes" to locate an explanation of the problem and possible solutions.

INDTR Trace Messages

INDTR001 Incorrect command format or missing parameter

Explanation: The TRACE command contains invalid information, or a required parameter is missing.

User Response: Correct the command and retry the operation.

INDTR002 Incorrect trace ID or range specified

Explanation: One of the IDs or ranges specified is incorrect.

User Response: Correct the command and retry the operation.

INDTR003 Incorrect parameter

Explanation: The TRACE command was specified with an invalid parameter.

User Response: Correct the command and retry the operation.

INDTR004 System error - xxxx

Explanation: Trace received an error return code xxxx from the workstation program.

User Response: Record the message identifier and the 4 character return code. Refer to Chapter 4, "Return Codes" to locate an explanation and correct the problem.

INDTR006 Requested traces have been enabled

Explanation: Trace has been turned on in response to a TRACE ON command.

User Response: None.

INDTR007 All traces have been disabled

Explanation: All traces have been turned off in response to a TRACE OFF command.

User Response: None.

INDWS Work Station Control Messages

INDWS001 No recording with this name exists: Press PF1 (List)

Explanation: During an autokey play or erase operation, the recording name entered did not match any names already in the recording directory.

User Response: Press PF1 to obtain a list of all the recordings you have made. Check the recording name and reenter the correct name.

INDWS002 Incorrect key pressed

Explanation: You pressed an incorrect key.

User Response: Check your information and retry.

INDWS003 The window is currently busy

Explanation: An internal function is currently active in the window.

User Response: Wait for the internal function to finish. For example, wait for the to disappear before retrying the operation.

INDWS004 Duplicate name entered: Choose a unique name

Explanation: During a recording procedure, you entered a recording name that had an exact duplicate in the autokey directory. Each recording name must be unique.

User Response: Choose a unique recording name.

INDWS005 Recording space full: Cannot record

Explanation: You attempted to start a recording when no free recording space was available for the record. The session cannot be started.

User Response: Use PF1 (list) to examine the list of current recordings and erase those no longer needed. Retry the record operation.

INDWS006 Cannot move the window further

Explanation: The window was moved to the edge of the physical screen. It cannot be moved off the screen.

User Response: Do not try to move the window any farther in that direction.

INDWS007 Wrong key or incorrect character entered

Explanation: While in work station control mode, you attempted to do a function with a window ID that was not valid.

User Response: Retry the function with a valid window ID.

INDWS008 Cannot shrink the window further

Explanation: While sizing a window, you attempted to shrink the selected window to less than a one-character-by-one-character window size.

User Response: Do not try to shrink the window farther.

INDWS

INDWS009 Cannot expand the window further

Explanation: While sizing a window, you attempted to enlarge the window larger than allowed.

User Response: Do not try to enlarge the window farther.

INDWS010 Window reached edge of Presentation Space

Explanation: While browsing a window, you tried to browse past the edge of the presentation space.

User Response: Do not try to browse in that direction any farther.

INDWS011 Cannot size or change position of window while enlarged

Explanation: You have enlarged a window. You cannot size it or change its position at this time.

User Response: If you want to size or change the window's position, press Enlarge again to return to the original window size. Now you can size it or change its position.

INDWS012 Cannot Play or Record: Playing or Recording in progress

Explanation: The active application already has a recording or play in progress. Another cannot be started until that autokey session has ended.

User Response: Press Quit to cancel the autokey session. If you are recording, also enter application mode and press Finish (Shift + End on the Enhanced PC keyboard) to end the recording.

INDWS013 Copy not allowed: Source and Target are not defined

Explanation: You attempted a copy operation by pressing Enter, but you have not defined both your source and target.

User Response: Define both your source and target at this time and then press Enter to perform the copy operation.

INDWS014 Source and Target are not the same size

Explanation: The source area defined is either larger or smaller than the target area defined.

User Response: You can do one of the following:

- Press PF13, Source (Shift + F1 on the Enhanced PC keyboard) and/or PF14, Target (Shift + F2 on the Enhanced PC keyboard), to redefine your source and/or target, making them both the same size.
- Continue with the copy operation by pressing Enter. If you allow the copy operation to complete:
 - Truncation occurs if the source is larger than the target.
 - The target area is padded with blanks if the source is smaller than the target.

INDWS016 Warning: Copy did not occur. Target is protected

Explanation: You tried to copy into a target area that is protected.

User Response: Redefine your target area and retry.

INDWS

INDWS018 Your system was not customized for a printer

Explanation: During customization, the printer option selected was **NONE**.

User Response: If you want to use your work station printer, your system must be recustomized. Refer to "Home" panel in the *User's Guide*.

INDWS019 Your system was not customized for Copy

Explanation: During customization, the copy option selected was **NO**.

User Response: If you want to use the copy function, your system must be recustomized. Refer to "Planning for Customization" in the *User's Guide*.

INDWS020 Your system was not customized for Autokey

Explanation: During customization, the autokey option selected was **NO**.

User Response: If you want to use the autokey function, your system must be recustomized. Refer to "Planning for Customization" in the *User's Guide*.

INDWS022 Cannot Play or Record: Input not allowed in this window

Explanation: The selected window cannot accept key-strokes for one of these reasons:

- The window has not been customized correctly.
- The control unit connection is not complete.
- The application was not defined to accept key-strokes.

User Response: Correct the cause of your problem listed above or select another window and continue work.

INDWS025 Cannot add another window: Maximum number reached

Explanation: The maximum number of windows has been added to the system.

User Response: If you want to add more windows, you will need to delete those that are unnecessary.

INDWS026 Cannot add or delete window on Screen Profile 0

Explanation: Screen profile 0 was created when you customized your work station. You cannot add windows to, or delete windows from, screen profile 0 during normal operation. This message may also occur if you begin typing data while in work station control mode.

User Response: Verify that you are in the proper mode, and do not try to add or delete windows from screen profile 0.

INDWS

INDWS027 All other windows are hidden: Next window is now visible

Explanation: When you performed a hide, all other windows for that screen profile were already hidden, forcing the previously active window to become visible. At least one window will always be visible on a defined screen profile.

User Response: Make sure at least one window is visible that you do not need hidden before hiding another.

INDWS029 Color setting override: Changes may not show

Explanation: Although your changes were made, the selected window is currently receiving instructions to ignore the selected settings. The colors appear after the window stops receiving instructions to ignore them.

User Response: Your color changes have taken effect. Go to your next operation.

INDWS030 Foreground and background colors are the same

Explanation: The foreground and background colors of the selected windows are identical. This causes your typed characters to be invisible.

User Response: This is a warning message. If you want to be able to see the characters in this window, change either the foreground or the background to a different color.

INDWS031 Cannot set color: No color display

Explanation: You do not have a color display. You cannot use the color function.

User Response: Do not try to use the color function. If you have a color display and this message appears, see the system checkout procedures in the *Guide to Operations* manual.

INDWS033 Cannot use Auto on undefined Screen Profile

Explanation: You tried to perform autokey functions while using an undefined screen profile.

User Response: Select a defined screen profile.

INDWS034 Cannot set color for a Personal Computer window

Explanation: The selected window was the personal computer window. Color for the personal computer window cannot be set in work station control mode.

User Response: Do not try to use the color function in the personal computer window.

INDWS035 Correct the name and press Enter

Explanation: The name you entered was all blanks.

User Response: Try a valid name and press Enter.

INDWS036 Cannot leave WS Ctrl mode: No available windows

Explanation: You pressed WS Ctrl while in work station control mode with an undefined screen profile selected.

User Response: Either change to a defined screen profile or add a window to the undefined screen profile.

INDWS

INDWS037 Cannot delete recording: Record or Play in progress

Explanation: A record or play operation is already in progress. This stops the delete operation.

User Response: End any recording or play sessions currently active on all windows before attempting to retry the delete function. You can examine all windows on screen profile 0 to find which have autokey active. In work station control mode, the operator information area indicates whether a record or play operation is in progress when you select a window.

INDWS038 Cannot begin another recording: Recording already in progress

Explanation: There is a recording session already active on some screen or window other than the one currently active.

User Response: End the first recording session before attempting another recording. You can examine all windows on screen profile 0 to find which one is recording by looking for REC in the work station control operator information area.

INDWS039 Cannot jump to another window: None are visible

Explanation: Either this window is the only one on this screen profile, or all other windows are hidden. This message appears only in work station control mode.

User Response: Either make more windows available or do not use the jump function.

INDWS040 Cannot use ChgSc: All other screens are empty

Explanation: The only defined screen profile is screen profile 0. This message appears only in work station control mode.

User Response: Either define more screen profiles, or do not use the change screen (ChgSc) function.

INDWS041 Printing in progress: Retry when printing is complete

Explanation: A print request is already in progress.

User Response: Wait for the print to finish. If the printing does not complete, perform system checkout for the printer as described in the *Guide to Operations* manual.

INDWS042 Print screen canceled by user

Explanation: You pressed the Quit key, canceling the current print operation.

User Response: None.

INDWS043 Print screen canceled: Printer not ready

Explanation: The printer is not ready, so the print operation is canceled.

User Response: If possible, check for the following possible reasons the printer is not ready:

- The printer may be out of paper.
- The printer may not be turned on.
- There may be a problem with the cable to the printer.

Check and correct any faulty conditions and retry the operation. If the failure persists, refer to "Printer Problem Determination" on page 2-58 to isolate the problem.

INDWS

INDWS045 Selected source not allowed

Explanation: The selected source window for the copy function is a personal computer session in graphics mode.

User Response:

- Press Finish to return to copy and select the correct source window, or
- Go back to Source by pressing PF13 (Shift + F1 on the Enhanced PC keyboard), or to Target by pressing PF14 (Shift + F2 on the Enhanced PC keyboard) and redefine the source or target.

INDWS046 Selected target not allowed

Explanation: The selected target window for the copy function is a personal computer session that is in graphics mode or that cannot accept a copy.

User Response:

- Press Finish to return to copy and select the correct source window, or
- Go back to Source by pressing PF13 (Shift + F1 on the Enhanced PC keyboard), or to Target by pressing PF14 (Shift + F2 on the Enhanced PC keyboard) and redefine the source or target.

INDWS047 Warning: Overlapping Source and Target areas

Explanation: The source and target areas overlap. Only the area defined first will be highlighted.

User Response:

- You may proceed with the copy function to copy the original contents of the source area into the target area by pressing Enter, or
- Go back to Source by pressing PF13 (Shift + F1 on the Enhanced PC keyboard), or to Target by pressing PF14 (Shift + F2 on the Enhanced PC keyboard) and redefine the source or target.

INDWS048 Copy not allowed: Input inhibited in Target window

Explanation: You attempted a copy operation while the keyboard was in an **Input inhibited** state for the selected target window.

User Response:

1. Press the WS Ctrl key (Shift + Esc on the Enhanced PC and XT or AT keyboard).
2. Press the Reset key (Right Alt on the Enhanced PC keyboard, Alt + F10 on an XT or AT keyboard).
3. If the keyboard is still locked, wait for it to “unlock.”
4. Verify that the host is operating.
5. Continue with your work.

If the keyboard remains locked, refer to “Keyboard Problem Determination” on page 2-48 to isolate the cause of failure.

INDWS049 Cannot use Browse -- invalid display mode

Explanation: For your hardware, Browse is not available in a PC session that is using graphics or 40 column mode.

User Response: None.

INDXF Document Distribution File Transfer Messages

INDXF001 File transfer waiting for work. Press the End key to quit

Explanation: The transfer program has completed its setup with your host window and is waiting for file transfer to be started from the host application.

User Response: Start the file transfer from your host session or press the End key to quit the transfer program.

INDXF002 File transfer started for: xxxxxxxx.xxx

Explanation: This message appears when a file transfer request has begun. The name of the file being transferred, xxxxxxxx.xxx, appears on the line below the message.

User Response: Allow the file transfer to proceed or press the Ctrl + Break keys (Ctrl + Pause on the Enhanced PC keyboard) to cancel the file transfer.

INDXF003 xxxxxx Data and xxxxxx Profile characters transferred so far

Explanation: This message tells you the number of characters in the computer file that have been sent to or from the host. The numbers are updated as the file is transferred. The number of profile characters may remain at zero if no profile is sent. After the entire file has been sent, message INDXF004 appears. If the transfer does not complete successfully, a transfer error message appears.

User Response: None.

INDXF

INDXF004 File transfer complete

Explanation: The file transfer request is complete.

User Response: Start another file transfer from your host window or press the End key to quit the transfer program.

INDXF005 Lost contact with host

Explanation: The host is inactive, or a communications link with the host has been lost.

User Response:

- If you have received an error code in the operator information area, copy it down and refer to "Host Communication Indicators" on page 2-21.
- If you did not receive an error code, retry the operation. If the problem persists, take a dump at the point of failure, follow local procedures and have available data from "Message Error Steps" 1 and 5 on page 3-111.

INDXF006 Error reading file from personal computer disk

Explanation: This message indicates that the disk or the diskette is probably damaged.

User Response: Retry the operation with a backup copy of the file being transferred. If the failure still occurs, refer to the *Guide to Operations* and run diagnostics for either the diskette drive or fixed disk.

INDXF007 Error writing file to personal computer disk

Explanation: This message indicates that the disk or diskette is either damaged, full, or unformatted—or you specified an invalid subdirectory. If you specified a subdirectory, verify its spelling.

User Response: Retry the operation with a properly formatted diskette and insure there is adequate space available. If the failure still occurs, refer to the *Guide to Operations* and run diagnostics for either the diskette drive or the fixed disk.

INDXF008 Host window short name omitted

Explanation: You have not entered the host window short name in the TRANSFER command.

User Response: Retry the TRANSFER command and include the window short name. An example of the format for the command is **TRANSFER b** where **b** is the window short name.

INDXF009 Incorrect window short name

Explanation: You have entered a window short name that is not a host window.

User Response: Retry the TRANSFER command with the correct host window short name. An example of the format for the command is **TRANSFER b** where **b** is the host window short name.

INDXF

INDXF010 Host has not responded within timeout period

Explanation: The host has not responded to the file transfer within a time-out period of 30 seconds.

User Response: If or appears in the host session operator information area, wait for it to clear. They indicate that the system is working slowly.

If you want to halt file transfer:

1. Switch to a host session if necessary.
2. Press Reset to clear the operator information area.
3. Restart your host application.

This situation can be caused by line problems. If the problem persists, follow local procedures and have the data available from "Message Error Steps" 1 and 4 on page 3-111.

INDXF011 Unrecoverable system error

Explanation: This message appears with messages INDXF023, through INDXF032, INDXF035, INDXF039, and INDXF040.

User Response: Refer to the user response section of the message that appears with this one.

INDXF012 Program error at host

Explanation: The transfer program has detected an error in the data from the host.

User Response: Refer to "Document Distribution File Transfer Problem Determination" on page 2-34 to isolate the cause of the failure.

INDXF013 Transfer program is terminating

Explanation: This message is displayed with message INDXF014 or any of the severe error messages.

User Response: None.

INDXF014 Transfer program canceled by user

Explanation: This message appears when you press the End key.

User Response: None.

INDXF015 Current file transfer canceled by host

Explanation: This message appears when the host application has signaled to the transfer program that the host does not want to continue with the current file transfer. This may be due to an input/output error at the host.

User Response: Write down the messages in the host session and follow instructions for that host application.

INDXF017 Program error detected by host

Explanation: This message appears when the host has sensed an error in the data sent to it by the transfer program.

User Response: Refer to “Document Distribution File Transfer Problem Determination” on page 2-34 to isolate the cause of the failure.

INDXF020 Transfer of current file is canceled

Explanation: This message appears with messages INDXF005 through INDXF007, INDXF012, and INDXF017.

User Response: None.

INDXF

INDXF021 Unable to access host window

Explanation: The transfer program was unable to access the host window. This may be due to another personal computer program currently having access to that host window.

User Response:

- If you are running multiple PC sessions, check the other PC sessions to determine if a PC application is using the host window you are attempting to access. If this is occurring, terminate the host connection or wait until the PC application has finished using the window.
- If you are not running multiple PC sessions, a previous PC application did not disconnect from the host window. Re-IPL the workstation program.

INDXF022 Host rejected previous file transfer

Explanation: The message appears when the host rejects a transmission that the transfer program assumed was successful. The Transfer program is waiting for a new request from the host. This message will be followed by message INDXF034.

User Response: See the user response for message INDXF034.

INDXF023 Keyboard connect return code - xxxx

Explanation: The transfer program was not able to connect to the keyboard of the host session.

User Response: Refer to Chapter 4, "Return Codes" to locate an explanation of the problem and possible solutions.

INDEXF024 Host connect return code - xxxx

Explanation: The transfer program was not able to connect to the host window.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDEXF025 Define receive buffer return code - xxxx

Explanation: The transfer program was unable to allocate a buffer to receive data from the host.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDEXF026 Write structured field return code - xxxx

Explanation: The transfer program encountered an error while sending data to the host.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDEXF027 Keyboard lock return code - xxxx

Explanation: The transfer program encountered an error while locking the keyboard of the host session.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDXF

INDXF028 Keyboard unlock return code - xxxx

Explanation: The transfer program encountered an error while unlocking the keyboard of the host session.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDXF029 Keyboard disconnect return code - xxxx

Explanation: The transfer program encountered an error while disconnecting from the keyboard of the host session.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDXF030 Dequeue return code - xxxx

Explanation: The transfer program encountered an error while looking for data from the host.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDXF032 Read structured field return code - xxxx

Explanation: An error occurred while the transfer program read data sent from the host.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDXF033 Data exception code sent to host - xxxxxxx

Explanation: This message concerns an error in the control data sent from the host.

User Response: Refer to “Document Distribution File Transfer Problem Determination” on page 2-34 to isolate the cause of the failure.

INDXF034 Data exception code sent from the host - xxxxxxx

Explanation: This message concerns an error in the control data sent by the transfer program.

User Response: Refer to “Document Distribution File Transfer Problem Determination” on page 2-34 to isolate the cause of failure.

INDXF035 Host disconnect return code - xxxx

Explanation: The transfer program detected an error while disconnecting from the host session.

User Response: Refer to Chapter 4, “Return Codes” to locate an explanation of the problem and possible solutions.

INDXF036 Current file transfer canceled by user

Explanation: This message appears when you press the Ctrl + Break keys during a file transfer. The transfer of the file stops, and the transfer program waits for more requests from the host.

User Response: Begin another file transfer or press the End key to quit.

INDXF

INDXF039 Query ID return code - xxxx

Explanation: The transfer program detected an error while querying the workstation program for the host window's session ID.

User Response: Refer to Chapter 4, "Return Codes" to locate an explanation of the problem and possible solutions.

INDXF040 Query parms return code - xxxx

Explanation: The transfer program detected an error while querying the workstation program for the host window's session characteristics.

User Response: Refer to Chapter 4, "Return Codes" to locate an explanation of the problem and possible solutions.

Message Error Steps

Use these steps only when you are directed to do so by a user response message in this chapter.

1. Record the sequence of events that caused the failure, including the keys pressed and in what order.
2. Reproduce the operation while running trace event(s):
 - a. 106
 - b. For CUT customized work stations: 61, 62, and 63.
For DFT customized work stations: 1, 71, and 76.
 - c. For CUT customized work stations: 62, 63, 65, 66, 68, and 69.
For DFT customized work stations: 72, 74, 77, 79, and 82.
 - d. For CUT customized work stations: 64, 66, 67, and 69.
For DFT customized work stations: 72, 74, 77, and 79.
3. If the problem persists, issue the command TRACE OFF /D to take a system dump.
4. Record the system level. To do this, look at your APAR list as described under "Listing the Current System Level and Currently Installed APARs" on page 5-11.
5. Have the dump available.
6. Record the customization attachment option specified: CUT or DFT.
7. Record 3274/3276 controller details: code level, model, configuration support, SNA/non-SNA, local or remote host attachment.
8. Know the access method used and its release level.
9. Know the operating system running on the host (for example, VM, MVS).
10. Have a copy of the system diskette.
11. Have diskette DUMPDATA.00x which is causing the problem.

Chapter 4. Return Codes

Introduction	4-2
Function ID X'12': System Services Return Codes	4-4
Function ID X'13': Environment Manager Services Return Codes	4-15
Function ID X'22' or X'23': DOS Subsystem Services Return Codes	4-23
Function IDs X'24' or X'25': System Loader Return Codes	4-31
Function ID X'30': DFT Operations Return Codes	4-37
Function ID X'32': Host Interactive Services Return Codes	4-46
Function ID X'46': CUT Return Codes	4-48
Function ID X'51': Notepad Operations Return Codes	4-50
Function ID X'62': Keyboard Services Return Codes	4-52
Function ID X'63': Window Management Services Return Codes	4-55
Function ID X'64': Copy Services Return Codes	4-59
Function ID X'67': Draw Service Return Codes	4-62
Function ID X'69': Presentation Space Services Return Codes ..	4-63
Function ID X'6B': Session Information Services Return Codes	4-66
Function ID X'6C': Translate Services Return Codes	4-69
Function ID X'6D': OIA Services Return Codes	4-70
Function ID X'6E': 3270 Keystroke Emulation Services Return Codes	4-71
Function ID X'6F': Keystroke Definition Return Codes	4-72
Function ID X'72': Error Handler Return Codes	4-73
Function ID X'7F': Dump Task Return Codes	4-74
Function ID X'81': Enhanced Connectivity Router Return Codes	4-75
Function IDs X'Dx through Fx': User System Extension Return Codes	4-76
Return Code Error Steps	4-77

Introduction

This chapter contains explanations of the return codes issued by the workstation program. These return codes can appear in messages on the screen, or can be returned to your application program when it requests an API service.

When, on occasion, two return codes appear together in a message, use the return code on the right to determine the cause of the failure.

Return codes are two bytes long. The first byte of the return code is the function ID, and the second byte is the error number. The function ID indicates the portion of the workstation program that is issuing the return code. The error number indicates the specific condition being reported. The possible function IDs are:

Function ID	Code Reported By
X'12'	Supervisor services
X'13'	Environment manager services
X'22' or X'23'	Multi-DOS support services
X'24' or X'25'	System Loader
X'30'	DFT system extension
X'32'	Host interactive services
X'46'	CUT system extension
X'52'	Notepad system extension
X'62'	Keyboard services
X'63'	Window management services
X'64'	Copy services
X'69'	Presentation space services
X'6B'	Session information services
X'6C'	Translate services
X'6D'	Operator information area services
X'6E'	3270 keystroke emulation services
X'72'	Error handler
X'7F'	Dump task
X'81'	Enhanced Connectivity Router

Notes:

1. Return codes with a function ID of X'Dx' through X'Fx' are generated by user-supplied system extensions. Consult local documentation for the meaning of these return codes and the action to take when they are encountered. If you get any return codes that are not listed, use the procedures at your location for diagnosing the problem.
2. "Local procedures," to which you are frequently referred during this chapter, are the procedures followed in your location for isolating problems or making repairs.

}

Function ID X'12': System Services Return Codes

Return codes beginning with function code X'12' indicate that an error occurred during supervisor operations, except return code X'1200', which indicates that the requested supervisor service was completed successfully.

Code	Explanation	Action to Take
1200	The requested supervisor service completed successfully.	None.
1201	The object being created does not have a unique name.	Ensure that the name is unique. If it is, rerun the application that caused the error. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1202	The supervisor cannot create any more objects, because the SVC table is full; service failed.	You must increase the SVC table resource. See "Return Code Error Step" 8 on page 4-77.
1203	The supervisor cannot create any more named objects, because the system name table is full; service failed.	You must increase the system name table resource. See "Return Code Error Step" 8 on page 4-77.
1204	The supervisor cannot create any more tasks, since it ran out of task control blocks; service failed.	You must increase the number of task control blocks. See "Return Code Error Step" 8 on page 4-77.

Code	Explanation	Action to Take
1205	The SVC index specified in the DX register or the parameter list is not valid for the service requested.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1206	The specified priority was out of range; requested service failed.	Check the input priority index parameter to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1207	The requested reply is not valid; service failed.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1208	The requested wait is not valid; service failed.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1209	The queue is empty.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the problem persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.

12xx - System Services Return Codes

Code	Explanation	Action to Take
120A	The nonpreemption type specified on create task service is invalid, defaulted to preemptable; service successful.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from “Return Code Error Steps” 1, 2, 3c, 4, 5, and 6 on page 4-77.
120B	The system request queue element pool is depleted; the system cannot continue.	You must increase the number of system RQEs. See “Return Code Error Step” 8 on page 4-77.
120D	A Release Semaphore request was issued for a semaphore that was already free.	Follow local procedures and have the data available from “Return Code Error Steps” 1, 2, 3c, 4, 5 and 6 on page 4-77.
120E	An invalid interrupt vector or level was specified; service failed.	Check the input parameters to the Supervisor. Check program logic and rerun the application. If the error persists, follow local procedures and have the data available from “Return Code Error Steps” 1, 2, 3c, 4, 5, and 6 on page 4-77.
120F	An invalid environment access was attempted; service failed.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from “Return Code Error Steps” 1, 2, 3c, 4, 5, and 6 on page 4-77.

Code	Explanation	Action to Take
1210	The timer is not owned by the requester; service failed.	Check the input parameter to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1211	No more timers are available.	You must increase the number of timer resources. See "Return Code Error Step" 8 on page 4-77.
1212	A request was made to a terminating task; service failed.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1213	The dequeue request failed; the request is too big.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1215	The Install User Exit Table Entry service was requested with an entry index that is out of range.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.

12xx - System Services Return Codes

Code	Explanation	Action to Take
1216	Invalid "count" parameter, which specifies the number of entries to be placed into a user exit table.	Check the count parameter in the input parameter list to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
121A	The system is running with an XMA card. On Install User Exit Table Entry Service, the User Exit Table is in an address space that is not available to the requester. For more information on system extensions and the XMA card, see the 3270 <i>Workstation Program Programming Guide</i> .	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
121D	There is insufficient memory for the supervisor to allocate requested resources.	Check the SIF file resource requests. Correct any errors that exist, or if there are no errors, reduce the number of system extensions.
121E	A first-level interrupt handler has run out of stacks.	Increase the number of stacks used by the first-level interrupt handler in the INDIBM2.SIF file. CAUTION: Increments of only one are advisable since each increment represents another 384 bytes.
121F	A version of IBM PC Land is lower than 1.2.	Use a version of the IBM PC Land program higher than 1.2, or run version 1.2 in re-director mode only.

Code	Explanation	Action to Take
1220	No more interrupt handlers can be installed.	You must increase the number of interrupt handler resources. See return code error step 8.
1221	The environment ID specified in the DL register or the parameter list is not valid for the service requested.	Check the environment ID input parameter to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1223	No free environment control blocks are available.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1224	The resource manager index specified in the request is invalid.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1225	The maximum number of resource managers was already defined.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1226	The maximum number of software interrupt vectors (32) were already taken. The mix of program applications is using too many software vectors for the supervisor to handle.	Stop any unnecessary applications to reduce the number of software interrupt vectors that are used.

12xx - System Services Return Codes

Code	Explanation	Action to Take
1228	The buffer provided on a Query Environment request was too small to contain the output; service failed.	Check the input parameter to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
122B	The environment already was suspended.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
122C	The semaphore was not claimed, even though "wait for semaphore" was specified. (Some other specified wait condition was satisfied first.)	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
122D	The stoppable environment was not allowed to create environments.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
122E	The name does not exist.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.

Code	Explanation	Action to Take
122F	The supervisor service does not exist.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1230	A task, fixed-length queue, or semaphore cannot be deleted if there are pending requests.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1231	The task cannot be deleted, because it owns a timer.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1232	The supervisor cannot stop or delete a nonstopable environment.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1233	The supervisor cannot find the specified resource.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.

12xx - System Services Return Codes

Code	Explanation	Action to Take
1234	The object to be installed in a gate is not a task or component, the gate length is invalid, or an invalid index (service number) was specified in the AL register on request.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1235	A user exit table cannot be created with a length of zero.	Correct the length and retry.
1236	No request queue elements are on the request queue.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1237	The dequeue with no wait failed because it is not the requester's turn.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1238	There is an error in opening a file.	Check the first message on the screen for the name of the file. Verify that the file exists on your system diskette. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 6, and 7 on page 4-77.

Code	Explanation	Action to Take
1239	There is not enough room in the fixed-length queue to enqueue the specified data.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
123A	There is an error reading in a file.	Check the first message on the screen for the name of the file. Verify that the file has not been damaged on your system diskette (follow the procedures in your DOS manual to run a Check Disk.). If there is damage, customize again on a new formatted diskette. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 6, and 7 on page 4-77.
123B	The supervisor cannot create any more gates, because the system gate table is full.	Increase the gate table size. See "Return Code Error Step" 8 on page 4-77.
123C	The type specified is not a valid semaphore type.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.

12xx - System Services Return Codes

Code	Explanation	Action to Take
123D	This code was returned on a claim semaphore with a no-wait; it means that the semaphore is already claimed.	Check the program logic. Correct the wait status if needed, and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
123F	The gates cannot be deleted.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1240	The delete environment is already pending.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1241	The fixed length queue size is in error.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.

Function ID X'13': Environment Manager Services Return Codes

Return codes beginning with function code X'13' indicate that an error occurred during environment manager operations, except return code X'1300', which indicates that the requested environment manager service was completed successfully.

Code	Explanation	Action to Take
1300	The requested environment manager service was completed successfully.	None.
1305	The SVC index specified in the DX register or the parameter list is not valid for the service requested.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
1306	The priority specified is not in the range of valid priorities.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.
130C	A request to stop, reset, suspend, or resume an environment failed because the return code field in the parameter list of the work request was not set to zero.	Set the return code field of the input parameter list to zero. Then rerun the application. If the error persists, follow local procedure. and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.

13xx - Environment Manager Services Return Codes

Code	Explanation	Action to Take
130F	The requester is not allowed to complete the type of request that was made because of invalid environment access.	Check to be sure the requester is allowed to complete the specified request. Then check the input parameters to the supervisor, check program logic, and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1314	A request was made to a task in an environment that was stopped, reset, or involved in an INDSPLIT or INDMERGE operation before the request could be acted upon.	Once the stop, reset, INDSPLIT, or INDMERGE is completed, the parameter list can be set up and the request made again. If the request was not made by an application and no error can be found in your procedures, check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3a, 4, 5, and 6 on page 4-77.
1317	The requester is in a stoppable environment and is trying to stop, suspend, or resume another environment.	Check that the requester is allowed to complete the specified request. Check the input parameters to the supervisor. Check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3a, 4, 5, and 6 on page 4-77.

Code	Explanation	Action to Take
1321	The environment ID specified in the DL register or the parameter list is not valid for the service requested.	Check the environment ID input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1322	An attempt to stop a personal computer environment that was made either through the API by using Alt-Ctrl-Del or by a request to delete an environment (using INDSPLIT or INDMERGE) failed because some resources were not successfully released. Some internal error occurred, and the stop is not recoverable.	The environment on which the stop was not completed cannot be used. It may be that a system error has occurred or that some resource manager or its device has hung. In this case you may want to turn power off and on again. If no error can be found in your procedures, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3a, 4, 5 and 6 on page 4-77.
1323	There are no free environment control blocks available.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1324	The resource manager index specified in the request is invalid.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.

13xx - Environment Manager Services Return Codes

Code	Explanation	Action to Take
1325	A resource manager Open request failed because there are no resource manager indexes available.	Increase the number of resource managers. See return code error step 8.

Code	Explanation	Action to Take
1327	An attempt to stop a personal computer environment that was made either through the API by using Alt-Ctrl-Del or by a request to delete an environment (using INDSPLIT or INDMERGE) failed because the process took too long to complete. The request may be completed at some later time.	<p>The environment in which the stop request was not completed cannot be used. If possible, wait until the condition clears. If it does not clear, another environment may be taking too much processor time, so that this stop request cannot be completed. You may reduce the system load by stopping another environment. If the condition does not clear, a system error may have occurred or some resource manager or its device has hung. In this case, you may want to turn power off/on again. If power off/on is not attempted, the system will continue to try to clean up. If the cleanup is completed, the environment manager will post a different return code, and the environment may be reused. If the cleanup is not completed, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3a, 4, 5, and 6 on page 4-77.</p>

Some common reasons that an environment cleanup will not be completed:

- The application is still holding a code serialization semaphore.
- The cleanup component did not delete all its resources.
- A task in the environment being cleaned up is waiting for a reply to a request from a system extension.

13xx - Environment Manager Services Return Codes

Code	Explanation	Action to Take
1328	The size of the output buffer specified in a Query Environment Characteristics request is too small to hold the data requested.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1329	A request was made to resume an environment that was not in a suspended state.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3b, 4, 5, and 6 on page 4-77.
132D	A request was made to create an environment, but the requester is in a stoppable environment.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1332	A request was made to stop a system environment that is non-stoppable.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3a, 4, 5, and 6 on page 4-77.

Code	Explanation	Action to Take
1333	A request to move a resource to the top of a resource chain or to delete a resource from a resource chain failed because the resource specified could not be found.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
1340	A previous request to delete the specified environment using INDSPLIT or INDMERGE is already in progress.	Check the input parameters to the supervisor. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3a, 4, 5, and 6 on page 4-77.
1342	A previous request to stop an environment made through the API by using Alt-Ctrl-Del or by a previous request to delete an environment (using INDSPLIT or INDMERGE) failed with a return code of X'1327', indicating a time-out has occurred. That request is now completed, and the environment is now available for reuse.	Make the window active that previously returned the error, and begin another application.

13xx - Environment Manager Services Return Codes

Code	Explanation	Action to Take
1343	A request to stop, reset, suspend, or resume an environment failed because the request type field in the parameter list was not a valid request type.	Check the input parameters to the supervisor, including the values in the parameter list. Then check program logic and rerun the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 3c, 4, 5 and 6 on page 4-77.

Function ID X'22' or X'23': DOS Subsystem Services Return Codes

Return codes beginning with function code X'22' or X'23' indicate that an error occurred during DOS subsystem operations, except return code X'2200', which indicates that the requested DOS subsystem service was completed successfully. In some cases, the return code indicates that the error was generated by DOS when the DOS subsystem issued a DOS function call.

Code	Explanation	Action to Take
2200	Requested DOS subsystem service was completed successfully.	None.
2201 or 2301	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 1. INVALID FUNCTION NUMBER.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2202 or 2302	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 2. FILE NOT FOUND.	Place the file that could not be found on the disk being used and retry the operation. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2203 or 2303	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 3. PATH NOT FOUND.	Place a disk in the drive with the correct path or create the path on the disk and then retry the operation. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.

22xx or 23xx - DOS Subsystem Services Return Codes

Code	Explanation	Action to Take
2204 or 2304	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 4. TOO MANY OPEN FILES (NO HANDLES LEFT).	Create a CONFIG.SYS on the IPL disk or edit the existing one and increase the number of file handles. The command in the file is FILES=xx, where xx is the number of file handles. See the DOS manual for details on setting up your CONFIG.SYS file. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2205 or 2305	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 5. ACCESS DENIED.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2206 or 2306	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 6. INVALID HANDLE.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2207 or 2307	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 7. MEMORY CONTROL BLOCKS DESTROYED.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2208 or 2308	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 8. INSUFFICIENT MEMORY.	Make more storage available and retry the request. If it appears that there should have been enough storage, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.

DOS Subsystem Services Return Codes - 22xx or 23xx

Code	Explanation	Action to Take
2209 or 2309	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 9. INVALID MEMORY BLOCK ADDRESS.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
220A or 230A	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 10. INVALID ENVIRONMENT.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
220B or 230B	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 11. INVALID FORMAT.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
220C or 230C	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 12. INVALID ACCESS CODE.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
220D or 230D	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 13. INVALID DATA.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77. chapter.

22xx or 23xx - DOS Subsystem Services Return Codes

Code	Explanation	Action to Take
220F or 230F	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 15. INVALID DRIVE WAS SPECIFIED.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2210 or 2310	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 16. ATTEMPT TO REMOVE THE CURRENT DIRECTORY.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2211 or 2311	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 17. NOT SAME DEVICE.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2212 or 2312	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 18. NO MORE FILES.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2213 thru 2253 or 2313 thru 2353	The DOS subsystem issued a DOS interrupt X'21' function call, and DOS failed the request with a DOS ERROR CODE nn, where nn is in hexadecimal.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.

Code	Explanation	Action to Take
22E2	An error occurred in the DOS subsystem. A Split or Merge command was rejected, because it was issued for an environment that does not exist.	Issue a Display Environment (INDDENV *) command to see what environments do exist. If it appears that the Split command should have been completed, take a system dump by pressing Alt + Ctrl + Test (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard), then follow your local procedures and have available the dump and the data from "Return Code Error Steps" 2 and 6 on page 4-77.
22E3	An error occurred in the DOS subsystem. A Split or Merge command was rejected, because it was issued for an environment that is being terminated.	Wait until the original Split command is completed. If it hangs, take a system dump by pressing Alt + Ctrl + Test (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard), then follow your local procedures and have available the dump and the data from "Return Code Error Steps" 2 and 6 on page 4-77.

22xx or 23xx - DOS Subsystem Services Return Codes

Code	Explanation	Action to Take
22E4	An error occurred in the DOS subsystem when the DOS environment task received an invalid request. The only valid requests are "Create" or "Clean Up."	If the problem can be re-created, follow your local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77. If the problem cannot be re-created, take a system dump by pressing Alt + Ctrl + Test (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard), then follow your local procedures and have available the dump and the data from "Return Code Error Steps" 2 and 6 on page 4-77.
22E5	An error occurred in the DOS subsystem when the DOS environment task received an invalid parameter list. The return code field of the input parameter list was nonzero.	Ensure that the parameter list passed to the DOS environment task has a zero return code field. If the problem persists, follow your local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77. If the problem cannot be re-created, take a system dump by pressing Alt + Ctrl + Test (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard), then follow your local procedures and have available the dump and the data from "Return Code Error Steps" 2 and 6 on page 4-77.

DOS Subsystem Services Return Codes - 22xx or 23xx

Code	Explanation	Action to Take
22E6	An error occurred in the DOS subsystem when the DOS Query Environment request received an invalid parameter list. The return code field of the input parameter list was nonzero.	<p>Ensure the parameter list passed to DOS Query Environment has a zero return code field. If the problem persists, follow your local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.</p> <p>If the problem cannot be re-created, take a system dump by pressing Alt + Ctrl + Test (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard), then follow your local procedures and have available the dump and the data from "Return Code Error Steps" 2 and 6 on page 4-77.</p>
22E7	A request was made with an invalid environment ID. A DOS Query Environment request was issued for an environment that does not exist, or a memory request was issued for an invalid environment.	Issue a Display Environment (INDDENV) command to see what environments do exist. If it seems that the Environment request should have been completed successfully, follow local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, 3c, 4, 5, and 6 on page 4-77.
22E8	An error occurred in the DOS subsystem. A Create Environment request was issued that was not completed.	This return code is always accompanied by a second return code (xxxx) that explains why the Create Environment request failed. Look up the second return code in this chapter and take the action recommended for that return code.

22xx or 23xx - DOS Subsystem Services Return Codes

Code	Explanation	Action to Take
23FD	A request was made using the Asynchronous DOS Function Request service without a prior request to connect for asynchronous DOS function requests.	Request the Asynchronous DOS Function Request service with a request type of X'00' to connect for asynchronous DOS function requests.
23FE	The request to the DOS subsystem to add a device to the DOS subsystem redirection function failed.	Run fewer programs that are adding entries into the redirection tables. Re-IPL to reset the DOS subsystem and retry the request. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
23FF	The DOS subsystem encountered an error while processing a request for a personal computer session for which there is no way to report the error to the application. The environment in which the application was running stopped.	This return code is always accompanied by a second return code (xxxx) that explains what the initial failure was. Look up the second return code and take the action recommended for that return code. Correct the problem in the application or system and retry the application. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.

Function IDs X'24' or X'25': System Loader Return Codes

Return codes beginning with function code X'24' or X'25' indicate that an error occurred during system loader operations.

Code	Explanation	Action to Take
2404	A request was made to the loader for storage to be allocated from the XMA card and assigned to a bank. This return code indicates there were no available banks.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, and 7 on page 4-77.
2405	A request was made to the loader for storage to be allocated from the XMA card and assigned to a bank. This return code indicates that the requested storage size was invalid.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, and 7 on page 4-77.

24xx or 25xx - System Loader Return Codes

2406	A request was made to the loader for storage to be allocated from the XMA card and assigned to a bank. This return code indicates that there was not enough storage available on the XMA card.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, and 7 on page 4-77.
	A 22E8 preceding the 2406 return code indicates that the workstation program ran out of XMA storage while trying to create a PC session. For example, you may receive 22E82406 if you customized the system for a 2-megabyte card and ran the system with a 1-megabyte card; or if you customized for multiple PC sessions, there may not be enough storage for the last session if you have device drivers and user system extensions.	Recustomize the system, referring to the <i>3270 Workstation Program User's Guide</i> to calculate the session sizes.
241B	A request was made to the loader for storage on the XMA card, and there was not enough storage available for the request.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, and 7 on page 4-77.

Code	Explanation	Action to Take
2501	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 1. INVALID FUNCTION NUMBER.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2502	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 2. FILE NOT FOUND.	Place the file that could not be found on the disk being used and retry the operation. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2503	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 3. PATH NOT FOUND.	Place a disk in the drive with the correct path or create the path on the disk and then retry the operation. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2504	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 4. TOO MANY OPEN FILES (NO HANDLES LEFT).	Create a CONFIG.SYS on the IPL disk or edit the existing one and increase the number of file handles. The command in the file is FILES=xx, where xx is the number of file handles. See the DOS manual for details on setting up your CONFIG.SYS file. If the error persists, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.

24xx or 25xx - System Loader Return Codes

Code	Explanation	Action to Take
2505	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 5. ACCESS DENIED.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.his chapter.
2506	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 6. INVALID HANDLE.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2507	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 7. MEMORY CONTROL BLOCKS DESTROYED.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2508	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 8. INSUFFICIENT MEMORY.	Make more storage available and retry the request. If it appears that there should have been enough storage, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
2509	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 9. INVALID MEMORY BLOCK ADDRESS.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.

Code	Explanation	Action to Take
250A	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 10. INVALID ENVIRONMENT.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
250B	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 11. INVALID FORMAT.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
250C	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 12. INVALID ACCESS CODE.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
250D	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 13. INVALID DATA.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
250F	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 15. INVALID DRIVE WAS SPECIFIED.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.

24xx or 25xx - System Loader Return Codes

Code	Explanation	Action to Take
2510	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 16. ATTEMPT TO REMOVE THE CURRENT DIRECTORY.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2511	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 17. NOT SAME DEVICE.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2512	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with DOS ERROR CODE 18. NO MORE FILES.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.
2513 thru 2553	The loader issued a DOS interrupt X'21' function call, and DOS failed the request with a DOS ERROR CODE nn, where nn is in hexadecimal.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5 and 6 on page 4-77.

Function ID X'30': DFT Operations Return Codes

Return codes beginning with function code X'30' indicate that an error occurred during DFT operations, except return code X'3000', which indicates that the requested DFT service was completed successfully.

If these return codes were issued due to some API interaction, they will be followed by another return code that better describes the problem and the best action to take; otherwise, follow the "Action to Take" information provided with the return code.

Code	Explanation	Action to Take
3000	The requested DFT service was completed successfully.	None.
3001	An error occurred during DFT operations while trying to sound a bell alarm.	None.
3002	There is no adapter card in your machine to support host sessions.	Re-customize for zero host sessions or install one of IBM's emulation adapters.
30C7	An error occurred during DFT initialization operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30C8	An error occurred during DFT operations because a nonresettable machine check was received.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30C9	An error occurred during DFT error-handling operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

30xx - DFT Operations Return Codes

Code	Explanation	Action to Take
30CA	An error occurred during DFT error-handling operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30CB	An error occurred during DFT error-handling operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30CC	An error occurred during DFT operations while changing screen size.	Take a system dump, follow local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30CE	An error occurred during DFT operations while finding the active logical terminal session.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30CF	An error occurred during DFT operations while finding the active logical terminal session.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D0	An error occurred during DFT initialization operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D1	An error occurred during DFT operations while resetting the DFT environment.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

Code	Explanation	Action to Take
30D2	An error occurred during DFT operations while reinitializing a keystroking task for any of the configured logical terminals.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D3	An error occurred during DFT operations while reinitializing a DFT inbound data task for any of the configured logical terminals.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D4	An error occurred during DFT operations while reinitializing a DFT outbound data task for any of the configured logical terminals.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D5	An error occurred during DFT operations while reinitializing a DFT link task.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D6	An error occurred during DFT operations while defining a window for each customized logical terminal.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D7	An error occurred during DFT initialization operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30D8	An error occurred during DFT initialization operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

30xx - DFT Operations Return Codes

Code	Explanation	Action to Take
30D9	An error occurred during DFT operations while linking to a task.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30DA	An error occurred during DFT operations while connecting the keyboard for a logical terminal.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30DB	An error occurred during DFT operations while performing the keyboard connection.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30DC	An error occurred during DFT operations while getting a key-stroke from a logical terminal keyboard.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77. Record the number of logical terminals with which you are operating and the number of the logical terminal into which you were keystroking.
30DD	An error occurred during DFT operations while receiving the key-stroke.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77. Then record the number of logical terminals with which you are operating and the number of the logical terminal into which you were keystroking.
30DE	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

Code	Explanation	Action to Take
30DF	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E0	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77. Record the number of logical terminals with which you are operating and the number of the logical terminal into which you were keystroking.
30E1	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E2	An error occurred during DFT inbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E3	An error occurred during DFT inbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E4	An error occurred during DFT inbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E5	An error occurred during DFT outbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

30xx - DFT Operations Return Codes

Code	Explanation	Action to Take
30E6	An error occurred during DFT outbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E7	An error occurred during DFT outbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E8	An error occurred during DFT operations while linking to a task.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30E9	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30EA	An error occurred during DFT inbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30EB	An error occurred during DFT outbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30EC	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

Code	Explanation	Action to Take
30ED	An error occurred during DFT inbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30EE	An error occurred during DFT outbound operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30EF	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F0	An error occurred during DFT keystroke operations.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F1	An error occurred during DFT operations; a logical terminal number cannot be found.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F2	An error occurred during DFT operations while requesting 7-color mode.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F3	An error occurred during DFT operations while drawing the cursor.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

30xx - DFT Operations Return Codes

Code	Explanation	Action to Take
30F4	An error occurred during DFT operations while requesting 4-color mode.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F5	An error occurred during DFT operations while drawing the cursor.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F6	An error occurred during DFT operations while drawing the OIA.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F7	An error occurred during DFT operations while drawing the OIA.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F8	An error occurred during DFT operations while drawing the cursor.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30F9	An error occurred during DFT operations while drawing a character.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30FA	An error occurred during DFT operations while drawing the cursor.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

Code	Explanation	Action to Take
30FB	An error occurred during DFT operations while drawing the cursor.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30FC	An error occurred during DFT operations while drawing the screen.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.
30FD	An error occurred during DFT operations while drawing the screen.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL the system.

Function ID X'32': Host Interactive Services Return Codes

Return codes beginning with function code X'32' indicate that an error occurred during host interactive services operations, except return code X'3200', which indicates that the requested host interactive service was completed successfully.

Code	Explanation	Action to Take
3200	The request was completed successfully.	None.
3201	The host session is not active.	The port is not geared for the host session that the application attempted to connect to. Do not attempt to connect to a host session that you have no attachment for.
3202	There was an invalid service request parameter.	Check the host session ID, fixed-length queue ID, and task ID. The task ID must be the same one specified on the connect request.
3204	The session is not connected.	Connect to the host interactive services and retry.
3208	A system error occurred.	Follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 on page 4-77.
320C	Byte 0 of the parameter list was nonzero on request.	Set byte 0 of the parameter list to zero and retry.

3210	A limit of three requesters are already connected.	No more than three applications may connect to a host session at one time.
	The message you sent was rejected.	<p>The device is not in a state to receive inbound transmissions. If the host keyboard is inhibited, pressing the Clear or the Reset key may allow the inbound transmission to work on retry.</p> <p>For destination/origin, the host application may not have indicated that it wants a reply from the personal computer program. If this does not seem to be the case, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, 4, 5, and 6 at the end of this chapter.</p>

Function ID X'46': CUT Return Codes

Return codes beginning with function code X'46' indicate that an error occurred during CUT operations.

These return codes will be followed by another return code that better describes the problem and the best action to take. Otherwise, follow the "Action to Take" information provided with the return code.

Code	Explanation	Action to Take
4601 thru 4603	An error occurred during the CUT second level interrupt handler task.	Re-IPL the system or take a system dump. Then follow local procedures and have the dump available as well as the data from "Return Code Error Steps" 1, 2, and 6 on page 4-77.
4604 thru 4607	An error occurred during the CUT hardware initialization task.	Re-IPL the system or take a system dump. Then follow local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, and 6 on page 4-77.
4608 thru 4611	An error occurred during the CUT key-stroke handling task.	Re-IPL the system or take a system dump. Then follow local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, and 6 on page 4-77.
4612	An error occurred during the CUT key-stroke transmit task.	Re-IPL the system or take a system dump. Then follow local procedures and have available the dump and the data from "Return Code Error Steps" 1, 2, and 6 on page 4-77.

Code	Explanation	Action to Take
4613 thru 4616	An error occurred during the CUT out- bound control task.	Re-IPL the system or take a system dump. Then follow local procedures and have available the dump and the data from “Return Code Error Steps” 1, 2, and 6 on page 4-77.
4617	There is no adapter card in your machine to support host sessions.	Re-customize for zero host ses- sions or install one of IBM's emulation adapters.

Function ID X'51': Notepad Operations Return Codes

Return codes beginning with function code X'51' indicate that an error occurred during notepad operations, except return code X'5100', which indicates that the requested notepad service was completed successfully.

Code	Explanation	Action to Take
5100	The requested notepad service was completed successfully.	None.
5101	The notepad cannot connect to the keyboard.	Refer to "Keyboard Problem Determination" on page 2-48.
5102	The notepad received an error indication on a READ KEYBOARD operation.	Refer to "Keyboard Problem Determination" on page 2-48.
5103	The notepad received an error indication while attempting a DRAW operation.	This error is generally caused by the incorrect insertion of a patch or code fix. To correct the problem, remove the last series of changes to the workstation program. If this does not correct the problem, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, and 6 on page 4-77.

Code	Explanation	Action to Take
5104	The notePad received an error indication during autokey operations.	This error generally occurs because of an incorrect insertion of a patch or code fix. To correct the problem, remove the last series of changes to the workstation program. If this does not correct the problem, follow local procedures and have the data available from "Return Code Error Steps" 1, 2, and 6 on page 4-77.

Function ID X'62': Keyboard Services Return Codes

Return codes beginning with function code X'62' indicate that an error occurred during keyboard operations, except return code X'6200', which indicates that the requested keyboard service was completed successfully.

Code	Explanation	Action to Take
6200	The requested service was completed successfully.	None.
6201	An invalid intercept option was specified on the Connect to Keyboard service request. Connectors that wish to do READs must set one of the intercept option bits on and specify an input queue ID. The first connector to a session input must specify "intercept all" and must provide an input queue ID. Others must specify "both" or "neither."	If the user is doing a READ, disconnect and reconnect using the correct intercept option bit and an input queue. If the user is connecting, ensure that either both or neither of the above inputs are in the parameter list. This error can also occur if the user is trying to connect to a host session that has not yet received a power-on reset from the control unit. (Missing a power-on reset can result from an inoperative control unit, a line configuration mismatch between the control unit and the work station, or a disconnected coaxial cable.) Byte 9 of the Connect to Keyboard parameter list containing a X'FF' is a further indication of this and should be treated as an abnormal condition. Under these conditions, the session has not yet completed preparations to accept keystrokes.

Code	Explanation	Action to Take
6202	An error occurred during input operations. An invalid session ID was found in bytes 2 and 3 of the parameter list, or the length specified in the list of keystrokes is greater than 255.	Use the session information services to determine the correct session ID and reissue the request, or correct the length of the list of keystrokes to be less than or equal to 255.
6204	On a Connect request, two connections are already made to the requested session ID. No more connections are allowed until one of them disconnects first.	If your program previously did a Connect, you are still connected. You must issue a Disconnect before reconnecting. Otherwise, if your program is not one of those connected, wait and try again later or notify the terminal operator to determine which other program is connected so it may be terminated, allowing yours to run.
	On all other keyboard API requests, you are not connected to the session whose ID is in bytes 2 and 3 of the parameter list.	Determine the correct session ID to use and ensure that Connect is issued before any other API function is used.
6209	On a Read Keystroke request with a No Wait option, there is no keystroke available on the queue.	Poll again for a keystroke, or continue with other processing.
620C	A nonzero return code was passed in byte 0 of the parameter list when the service was requested.	Set byte 0 of the parameter list to zero and retry the request.

62xx - Keyboard Services Return Codes

Code	Explanation	Action to Take
6210	An error occurred during input operations. On a Write Keystroke request, the last key sent was rejected because either it was an invalid scan code for the session to which it was sent, or an inhibit condition was present in that session.	Determine if the last key sent is valid for the target session (for example, the ESC key is invalid for a DFT session or a PA1 key has no meaning to a personal computer session). Other responses depend on the indications present in the target session. For example, if a key was sent and entered into a protected field of a DFT session, a reset key must be sent to clear the inhibit condition before any more keystrokes will be accepted by that session.
6212	On a Connect operation, the Connect has been rejected because an autokey record is in progress.	Notify the terminal operator that the autokey operation must be terminated before this or any keyboard API function can be processed.
	On a Write Key operation, the last key sent was detected as an AID key. If the user is sending a list of keys, the processing of that list ended with that key.	If the user is processing a list of keys, determine how many of them were sent by looking at byte 7 of the returned parameter list. When the session is able to receive more keys, send the remainder.
	Note: This does not mean that an error occurred.	
6214	On a Connect operation, the connect was rejected because an autokey playback is in progress.	Notify the terminal operator that the autokey operation must be terminated before this or any other keyboard API function can be processed.

Function ID X'63': Window Management Services Return Codes

Return codes beginning with function code X'63' indicate that an error occurred during work station control operations, except return code X'6300', which indicates that the requested window management service was completed successfully.

Code	Explanation	Action to Take
6300	The requested service was completed successfully.	None.
6301	There is no space for additional windows.	To add a window, a window must first be deleted from this or another screen.
6302	An invalid session ID was specified. The ID did not match the one specified on the Connect to Work Station Control request. If the function that failed was the connect, then the session ID specified is not within the valid range of session IDs.	Use the session ID that was specified on the Connect to Work Station Control service request to perform the function. If this return code occurs during the connect process, then the proper session ID for the session is needed.
6303	There is not enough storage to relocate initialization code.	Additional storage must be obtained in order to load the module.

63xx - Window Management Services Return Codes

Code	Explanation	Action to Take
6304	The caller is not connected to the work station control session. The work station control session is already in use by one of the following: <ul style="list-style-type: none">● Another application program● The user (by pressing the WSCRTL key)● The workstation program.	Connect to the work station control session before attempting to perform a function. Try to connect to the work station control session when it is available.
6305	The specified window ID already exists on the specified screen ID.	Either delete the desired window from the screen (so that it may be put back later) or specify another window ID to be added.
6306	An invalid screen ID was specified. The desired screen either does not exist or cannot be used for the requested function.	Specify a valid ASCII screen ID to the function.
6307	The specified window ID was not found on the specified screen ID.	Specify a valid ASCII ID of a window on a screen to perform the function.
6309	The specified window ID was not found on Screen 0.	Specify a window ID of a window that exists on Screen 0.

Code	Explanation	Action to Take
630A	The user attempted to hide a window when it is the only window on the screen.	Add at least one more window before attempting to hide a window.
630B	All windows on the screen are hidden; the next window on the chain will be unhidden.	None.
630C	A nonzero return code was passed in byte 0 of the parameter list when the request was issued.	Set byte 0 of the parameter list to zero and retry the request.
630D	The specified screen ID is not that of the active screen.	Specify the ID of the active screen or make the desired screen active to perform the function.
630E	No windows exist on the specified screen ID.	The function cannot be performed when no windows exist on the requested screen.
630F	Colors cannot be set on for a PC session.	Provide a non-PC window ID to set colors.
6310	Either the row or column values sent caused the window to not fit fully on the screen or presentation space, or one or both of the values were equal to zero.	This is an informational return code. The window has been placed on the screen but has been modified to allow it to fit on the screen with correct values. The changes will be sent back using the parameter list.
6311	Some or all of the values sent in the parameter list were either not correct or caused the window to not fit fully on the screen or presentation space.	This is an informational return code. The window has been placed on the screen but has been modified to allow it to fit on the screen with correct values. The changes will be sent back to the calling program using the parameter list.

63xx - Window Management Services Return Codes

Code	Explanation	Action to Take
6312	The foreground and background colors are the same.	This is an informational return code. You should change colors as desired.

Function ID X'64': Copy Services Return Codes

Return codes beginning with function code X'64' indicate that an error occurred during copy operations, except return code X'6400', which indicates that the requested copy service was completed successfully.

Code	Explanation	Action to Take
6400	The requested copy service was completed successfully.	None.
6401	The selected source is not allowed. It is a personal computer window in graphics mode.	Select a different source.
6402	An invalid session ID was passed on request to the Connect or Disconnect for Copy to Personal Computer Session services. The specified session is not a personal computer session.	Correct the session ID and retry.
6403	Input is inhibited in the target. A copy operation was attempted while the keyboard was in an "input inhibited" state for the selected target window.	<ol style="list-style-type: none">1. Wait for the keyboard to "unlock".2. Try the copy again.3. Verify that the host is operating. If the keyboard remains locked, refer to "Keyboard Problem Determination" on page 2-48.
6404	There is not enough storage to relocate the initialization code.	Additional storage must be obtained in order to load this module.

64xx - Copy Services Return Codes

Code	Explanation	Action to Take
6405	Warning: There is an overlapping source and target area. The copy was successful.	Verify the target area.
6406	The source definition in the parameter list is missing a parameter or has invalid information.	Correct the source definition and retry the copy.
6407	The target definition in the parameter list is missing a parameter or has invalid information.	Correct the target definition and retry the copy.
6409	Warning: The source and target are not the same size. If the source is larger than the target, truncation occurs. If the source is smaller than the target, the target area is padded with blanks and copy occurred.	Verify the target area.
640C	The return code passed in the parameter list on request was not zero.	Set the return code field in the parameter list to zero and retry.
640D	The selected target is not allowed. Either the selected target is a PC window that did not do a copy connect first, or the PC target is in graphics mode.	Select a different target.
640E	The target window is protected.	Redefine the target area.

Copy Services Return Codes - 64xx

Code	Explanation	Action to Take
640F	The copying of field attributes is not allowed unless the target window is a PC window that is attached to 3270 keystroking or the target is a PC buffer form.	Attach the window to 3270 keystroking or remove the bit in the parameter list to copy field attributes or make the target a PC buffer.

Function ID X'67': Draw Service Return Codes

Return codes beginning with function code X'67' indicate that an error occurred during draw operations, except return code X'6700', which indicates that the requested draw service was completed successfully.

Code	Explanation	Action to Take
6700	The draw request was completed successfully.	None.
6703	There is not enough storage to relocate initialization code.	Obtain additional storage in order to load the module.
6708	The parameter list definition has a missing parameter on the request.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL.
670C	The return code passed in the parameter list on request was not zero.	Follow your local procedures, and have the data available from "Return Code Error Steps" 1, 2, 5, 6, and 7 on page 4-77, or re-IPL.

Function ID X'69': Presentation Space Services Return Codes

Return codes beginning with function code X'69' indicate that an error occurred during presentation space operations, except return code X'6900', which indicates that the requested presentation space management service was completed successfully.

Code	Explanation	Action to Take
6900	The requested presentation space management service was completed successfully.	None.
6902	The specified session ID is unknown.	The Define Presentation Space function will return the session ID to be used with all subsequent requests concerning this new presentation space. Ensure that the specified session ID is one returned from the Define Presentation Space request.
6903	The specified offset for the display is not within the address of the presentation space.	Correct the offset supplied in the parameter list and retry.
6906	An invalid cursor type was specified in the parameter list for the Display Cursor service request.	Correct the cursor type and retry.
6907	An invalid cursor address was specified in the parameter list for the Display Cursor service request.	Correct the cursor address and retry.

69xx - Presentation Space Services Return Codes

Code	Explanation	Action to Take
6909	The specified length is invalid in the parameter list for the Display Presentation Space service request.	Correct the length and retry.
690A	An invalid number of commands are in the presentation space data stream.	Correct the number of commands in the header of the presentation space data stream and retry.
690B	An invalid number of rows/columns are in the presentation space data stream for the Define Presentation Space service request.	Correct the row/column information in command type 1 of the presentation space data stream and retry.
690C	Byte 0 of the parameter list is nonzero on request.	Set byte 0 of the parameter list to zero and retry.
690D	There is invalid data in the “Set Presentation Space Type” data stream command of the Define Presentation Space service request.	Correct the presentation space type and retry.
690F	A command that had no data was found in the presentation space data stream of the Define Presentation Space service request.	The address supplied on command 03 or command 04 was zero. Correct and retry.
6910	A Delete Presentation Space request was issued for a session ID that is an initial resource (that is, a configured personal computer session).	A Delete Presentation Space request can only be issued for a presentation space that was previously defined by the Define Presentation Space request.

Presentation Space Services Return Codes - 69xx

Code	Explanation	Action to Take
6911	One or more of the input parameters is not valid.	Review input parameters and ensure they are valid.
6913	The address of the work area on request to the Define Presentation Space service was zero.	Correct the work area segment address and retry the request.
6914	The Define Presentation Space service was requested, and the maximum number of PC presentation spaces has already been created.	Another Define Presentation Space request cannot be completed until an existing presentation space is deleted.
6915	The “Set Presentation Space Buffer” command was missing from the presentation space data stream of the Define Presentation Space service request.	Correct the presentation space data stream to include command 03 and retry.
6918	The “Set Presentation Space Size” command was missing from the presentation space data stream of the Define Presentation Space service request.	Correct the presentation space data stream to include command 01 and retry.
6919	The “Set Presentation Space Type” command was missing from the presentation space data stream of the Define Presentation Space service request.	Correct the presentation space data stream to include command 02 and retry.

Function ID X'6B': Session Information Services Return Codes

Return codes beginning with function code X'6B' indicate that an error occurred during session management operations, except return code X'6B00', which indicates that the requested session information service was completed successfully.

Code	Explanation	Action to Take
6B00	The requested service was completed successfully.	None.
6B01	All short window names are currently in use.	Delete a window to free a short window name.
6B02	The session ID in the parameter list is outside of the legal range.	Correct the session ID in the parameter list and retry.
6B03	The long window name was not found in the Session Manager table.	Check that the long name is in ASCII. Then check the long name spelling. Correct and retry.
6B05	Too many attachments were made. The maximum attachments allowed are 255.	You must request the Detach Session ID service for the given session ID before further attachments will be allowed.
6B06	The session ID in the parameter list was not found in the session manager table, indicating that the session is no longer defined.	Correct the session ID in the parameter list and either retry or ignore the error.
6B07	The short window name is already in use.	Choose an unused short window name and retry.

Code	Explanation	Action to Take
6B09	There is an invalid type field in the parameter list.	Correct the parameter list and retry.
6B0A	The environment ID in the parameter list was not found in the session manager table. This indicates that either the specified environment ID is invalid or the specified environment ID was valid at one time but is not currently active.	Correct the environment ID in the parameter list and either retry or ignore the error.
6B0B	The window short name was not found in the session manager table.	Correct the window short name in the parameter list and either retry or ignore the error.
6B0C	The return code in the parameter list is not zero on call.	Set the return code field in the parameter list to zero and retry.
6B0D	There is an invalid option code in the parameter list.	Correct the option code and retry.
6B0E	The base window was not found. This indicates that either the specified environment ID is invalid or the specified environment ID was valid at one time but is not currently active.	Correct the environment ID in the parameter list and either retry or ignore the error.
6B0F	There are no available entries in the session manager table. No additional session can be established.	Detach a session ID or wait until a session ID becomes free.

6Bxx - Session Information Services Return Codes

Code	Explanation	Action to Take
6B11	The session type was not found in the session manager table.	Correct the type field in the parameter list or ignore the error.
6B12	The length of the name array is incorrect.	Correct the name array length and retry.
6B13	The window short name is not in uppercase ASCII alphanumeric characters.	The short window name must be uppercase ASCII alphanumeric characters. Correct and retry.
6B14	Cannot detach from this session now.	Check to make sure you have not issued more detaches than attaches.

Function ID X'6C': Translate Services Return Codes

Return codes beginning with function code X'6C' indicate that an error occurred during translate operations, except return code X'6C00', which indicates that the requested translate service was completed successfully.

Code	Explanation	Action to Take
6C00	The requested service was completed successfully.	None.
6C01	There is an invalid translate type in the parameter list.	Change the translate type in the parameter list and retry.
6C0C	Byte 0 of the parameter list was nonzero on request.	Set byte 0 of the parameter list to zero and retry.)

Function ID X'6D': OIA Services Return Codes

Return codes beginning with function code X'6D' indicate that an error occurred during operator information area operations, except return code X'6D00', which indicates that the requested operator information area service was completed successfully.

Code	Explanation	Action to Take
6D00	The requested service was completed successfully.	None.
6D02	An invalid session ID was specified in the parameter list.	Correct the session ID and retry.
6D0C	Byte 0 of the parameter list was nonzero on request.	Set byte 0 of the parameter list to zero and retry.

Function ID X'6E': 3270 Keystroke Emulation Services Return Codes

Return codes beginning with function code X'6E' indicate that an error occurred during 3270 keystroke emulation operations, except return code X'6E00', which indicates that the requested 3270 keystroke emulation service was completed successfully.

Code	Explanation	Action to Take
6E00	The requested service was completed successfully.	None.
6E02	On a Connect request, the specified presentation space has not been defined to accept 3270 keystroking emulation.	Use the Define Presentation Space service to create a presentation space that is defined to accept 3270 keystroking emulation. Specify this presentation space on the Connect for 3270 Keystroke Emulation service request.
	On a Read AID Key request, the specified presentation space has not been connected for 3270 keystroking emulation.	Correct the specified session ID and request the Read AID Key service again.
6E08	A system error occurred during 3270 keystroke emulation operations.	Follow local procedures and have the data available from return code error step 9 at the end of this chapter.
6E0C	Byte 0 of the parameter list was nonzero on request.	Set byte 0 of the parameter list to zero and retry.

Function ID X'6F': Keystroke Definition Return Codes

Return codes beginning with function code X'6F' indicate that an error occurred during 3270 keystroke definition initialization, except return code X'6F00', which indicates that the requested 3270 keystroke definition service was completed successfully.

Code	Explanation	Action to Take
6F00	The keystroke definition initialization was completed successfully.	None
6F01	An ID request was issued to the keyboard with no response.	Refer to the <i>Guide to Operations</i> and run the keyboard diagnostics.
6F02	An unsupported or invalid ID was returned from the keyboard.	Check that the switch settings on the Model 1A keyboard are off. If they are off, the keyboard is defective. In other cases, the keyboard is defective or incompatible.

Function ID X'72': Error Handler Return Codes

Return codes beginning with function code X'72' indicate that an error occurred during error handler operations.

Code	Explanation	Action to Take
7201	A component is trying to report an undefined return code to the error handler.	This return code is followed by a second return code. Follow the directions given under the "Action to Take" column for that return code.
7202	A component is trying to add a return code to the error handler error table, but the table is full.	This return code is followed by a second return code. Follow the directions given under the "Action to Take" column for that return code.
7203	A component is trying to add a return code to the error handler error table with an invalid severity.	This return code is followed by a second return code. Follow the directions given under the "Action to Take" column for that return code.
7204	A dump was requested using "TRACE OFF /d".	None.
7205	A dump was requested by pressing the NMI button.	None.
7206	A dump was requested by pressing the Alt + Ctrl + Test keys (Alt + Ctrl + Scroll Lock on the Enhanced PC keyboard, Alt + Ctrl + { + on the numeric keypad} of an XT or AT keyboard).	None.

Function ID X'7F': Dump Task Return Codes

Return codes beginning with function code X'7F' indicate that an error occurred during dump task operations.

Code	Explanation	Action to Take
7F01	An error occurred during system startup before the error handler could be loaded into storage and successfully initialized.	Re-IPL the system. If the error recurs, follow local procedures and submit a problem report.
7F02	An error occurred while running a graphics application without a graphics adapter.	Press any key to re-IPL your system. If the error recurs, follow local procedures and submit a problem report.
7F03	A graphics application is already in progress in another PC window.	Press any key to re-IPL your system. If the error recurs, follow local procedures and submit a problem report.
7FFF	An error occurred in the Multi-DOS portion of the workstation program before the error handler could be loaded into storage and successfully initialized.	Re-IPL the system. If the error recurs, follow local procedures and submit a problem report.

Function ID X'81': Enhanced Connectivity Router Return Codes

Return codes beginning with function code X'81' indicate that an error occurred during enhanced connectivity router operations.

Code	Explanation	Action to Take
8101	No DFT sessions exist.	Rerun customization to add a DFT session.
8104	Insufficient space to relocate initialization code.	Obtain additional storage in order to load the module.

Function IDs X'Dx' through X'Fx': User System Extension Return Codes

Return codes with a function ID of X'Dx' through X'Fx' are generated by user-supplied system extensions. Consult local documentation for the meaning of these return codes and the action to take when they are encountered.

Return Code Error Steps

Use these steps only when you are directed to do so by an 'action-to-take' message in this chapter.

1. Record the return code.
2. Record the sequence of events that caused the failure, including the keys pressed and in what order.
3. Turn on the Trace events:
 - a. 95, 96, 97, 98, 99, 101, and 102
 - b. 93, 94, 101, and 102
 - c. 101 and 102
4. Rerun the application that caused the error until the error recurs.
5. If the problem persists, issue the command TRACE OFF /D to take a system dump.
6. Record the system level. To do this, look at your APAR list as described under "Listing the Current System Level and Currently Installed APARs" on page 5-11.
7. Record the system configuration, which is a list of the hardware, including installed options. This may be found in your *Guide to Operations* and the contents of the customization panels.
 - a. Insert the customized system diskette in the active drive.
 - b. If you have a printer, type:
TYPE INDCFIG.FIL> PRN
and press Enter.
 - c. If you do not have a printer, type:
MORE < INDCFIG.FIL
and press Enter.

Write down the contents of the customization panels.

Return Code Error Steps

8. For the system extension in which the error occurred, increase the resource requirements in its SIF. Refer to the *User's Guide* for information on SIFs.
9. The return code received was accompanied by a message to take a dump. Record the return code and take a dump if the error persists.

Chapter 5. Creating, Installing, and Removing Patches

Introduction	5-2
Describing the Patch Format	5-3
Creating a Patch File	5-5
Creating a Patch File with an Editor	5-5
Creating a Patch File with the Patch Create Utility	5-6
Installing a Patch	5-9
Listing the Current System Level and Currently Installed APARs	5-11
Removing a Patch	5-12

}

Introduction

This chapter contains instructions for installing the temporary software changes called **patches** or **fixes**. The program runs on DOS and is invoked in a personal computer session. The program allows you to create, install, or remove patches to the code and data. It also provides historical tracking and is limited to 100 workstation program patches per release. A problem that the patch service utility resolves is identified in an **Authorized Problem Analysis Report (APAR)**.

This appendix describes how to:

1. Interpret the information you will put in a patch file
2. Create a patch file
3. Install a patch
4. List the current system level and currently installed APARs
5. Remove a patch.

Note: Chapter 3 contains the messages that may be issued during patch processing.

Describing the Patch Format

Let's assume that IBM has sent you a patch to solve a problem. It will be written in a format similar to one of the following two examples:

- **Example 1:**

```
PRE LEVEL = 2101
PRE APAR = IR00001
ZAP A:\INDCIPL (OFF=01C4, VER=10CD21C3,
REP=42424242)
```

- **Example 2:**

PRE LEVEL = 2101	PRE LEVEL CHECKSUM = EC
PRE APAR = IR00001	PRE APAR CHECKSUM = BC
MODULE NAME = INDCIPL	MOD CHECKSUM = E9
OFF = 01C4	OFF CHECKSUM = FD
VER = 10CD21C3	VER CHECKSUM = D2
REP = 42424242	REP CHECKSUM = 30

The elements of these patches are described below.

PRE LEVEL = 2101

- This is the level the system must be at for this patch.
- It must be the first entry in a patch file.
- It is **always required**.

PRE APAR = IR00001

These are prerequisite APARs you need to install before you install this patch. Not all patches have prerequisites. You can have up to 99 prerequisite APARs.

ZAP

This line contains the changed data. There must be at least one ZAP.

The Patch Format

INDCIPL

This is the name of the module containing the problem.

OFF = 01C4

This is the offset, in hexadecimal, from the beginning of the module named INDCIPL.

VER = 10CD21C3

This is the data to be replaced, in hexadecimal, beginning at the offset.

REP = 42424242

This is the data, in hexadecimal, that replaces the VER data beginning at offset value 01C4.

CHECKSUMS

These are numbers used to verify that data was entered correctly.

Creating a Patch File

Before you install the patches, you will need to create a **patch file** for each patch. For a single diskette drive, insert your existing system diskette to be patched in drive A and create all patch files on that diskette. For multi-diskette drives, we suggest you have the system diskette you are patching in drive A, and all patch files you create on a diskette on drive B or on the fixed disk. For a fixed disk, we suggest you create all patch files on that fixed disk.

There are two ways to create a patch file. If the patch format you received is similar to that in Example 1, you must create the patch with the DOS EDLIN editor or any equivalent editor. If the patch format you received is similar to that in Example 2, use the patch create utility.

Creating a Patch File with an Editor

To create a patch file in a personal computer session:

1. Create a new file, using the 7-character APAR number sent to you with the patch for the file name, with the editor that is on your system.
2. Enter the written information you received from IBM. If you received the following patch, use the editor to type the three lines exactly as you see them. Your file should look like this:

```
PRE LEVEL = 2101  
PRE APAR = IR00001  
ZAP A: \INDCIPL (OFF=01C4, VER=10CD21C3, REP=42424242)
```

Note: Be sure that there are no blank lines in the patch files.

3. Save your file in accordance with procedures of your editor.

Creating a Patch File

So far you have done the following:

1. Received the patch in written form
2. Created a file in a personal computer session with the APAR number as the file name.
3. Entered the information for the patch into the file.

Remember that a patch file using this method contains one patch. If you have three patches to install, you will have to create three patch files, each with its own unique APAR number for the file name.

To install the patch, see “Installing a Patch” on page 5-9.

Creating a Patch File with the Patch Create Utility

To create a patch file in a personal computer session with the information in the form shown in Example 2, follow the steps below. At any time during the patch create process, you may exit the process by pressing the Enter key.

1. At the DOS prompt, type:

indpatch

2. Press Enter.

3. The following prompt appears:

<C>reate, <I>nstall, <R>emove, or <L>evel :

Type **c** for Create and press Enter.

4. The following prompt appears:

APAR Number.....:

Type the 7-character APAR number sent to you with the patch and press Enter.

5. The next prompt appears:

Prerequisite system level....:

Type the number in the patch following PRE LEVEL = and press Enter.

6. The next prompt appears:

Check Sum.....:

Type the hexadecimal number that follows PRE LEVEL
CHECKSUM = and press Enter.

7. The next prompt appears:

Prerequisite APAR.....:

Type the name that follows PRE APAR = if there is one, and
press Enter. If there are no prerequisite APARs, press Enter and
go to step 10.

8. The next prompt appears:

Check Sum.....:

Type the hexadecimal number that follows PRE APAR
CHECKSUM, if there is one, and press Enter.

9. The next prompt appears:

Prerequisite APAR.....:

If there are more PRE APAR items, enter each name and, as
prompted, its check sum. When there are no more prerequisite
APARs, simply press Enter.

10. The next prompt appears:

Module name.....:

Type the name following MODULE = and press Enter.

11. The next prompt appears:

Check Sum.....:

Type the hexadecimal number following MOD CHECKSUM and
press Enter.

12. The next prompt appears:

Offset.....:

Type the hexadecimal number following OFF = and press Enter.

Creating a Patch File

13. The next prompt appears:

Check Sum.....:

Type the hexadecimal number following OFFSET CHECKSUM = and press Enter.

14. The next prompt appears:

Verify Data.....:

Type the hexadecimal number following VER = and press Enter.

15. The next prompt appears:

Check Sum.....:

Type the hexadecimal number that follows VER CHECKSUM = and press Enter.

16. The next prompt appears:

Replace Data.....:

Type the hexadecimal number that follows REP = and press Enter.

17. The next prompt appears:

Check Sum.....:

Type the hexadecimal number that follows REP CHECKSUM = and press Enter.

18. The next prompt appears:

Module name.....:

If you have more lines of zaps to install, go to step 10. Otherwise, simply press Enter.

Message INDPA031 appears:

INDPA031 Patch file for APAR (IR00002) created.

Installing a Patch

If you have a single-diskette drive system, the two 3270 Workstation Program files, INDPATCH.COM and INDQPCH.DAT, must both be on the diskette being patched.

If the patch file is on a different diskette or disk, place INDPATCH.COM and INDQPCH.DAT on that diskette or disk. Make the diskette or disk active by typing the drive identifier letter and a colon, for example, B: .

Note: If you do this, make sure the disk drive and path information is present for the module being changed.

If the patch file is in a subdirectory, place INDPATCH.COM and INDQPCH.DAT in the same subdirectory that the APARs are in. Make that subdirectory active with the DOS CHDIR (Change Directory) command. Refer to the IBM Personal Computer *Disk Operating System* manual for further information on this command.

Note: If you do this, make sure the disk drive and path information is present for the module being changed.

The following prompts help you install a patch. First, your personal computer session must be active. When the DOS prompt appears:

1. Type:
indpatch
2. Press Enter.
3. The following prompt appears:
<C>reate, <I>nstall, <R>emove, or <L>evel :

First you are going to install a patch:

- a. Type:
i
- b. Press Enter.

Installing a Patch

4. The next prompt appears:

Type APAR number of patch and press Enter, or
press Enter to Quit

Type the APAR number and press Enter. This is also the file
name that contains the patch.

5. The ZAP data line associated with that APAR number appears on
your display screen:

ZAP A:\INDCIPL (OFF=01C4, VER=10CD21C3,
REP=42424242) Verify is correct

6. A final prompt indicates that the patch has been installed:

INDPA026 Patches Installed

Listing the Current System Level and Currently Installed APARS

You can look at your APAR History list to see the current system level and the currently installed APARS. When the DOS prompt appears:

1. Type:
indpatch
2. Press Enter.
3. The following prompt appears:
<C>reate, <I>nstall, <R>emove, or <L>evel :
 - a. Type
L
 - b. Press Enter.
4. An APAR History list, a listing of currently installed APARS on your system, appears on your screen. Notice also the current system level. Your screen should look something like this:

```
APAR History
System Level =2101

APAR          APAR          APAR          APAR
IRO0001       IRO0002       IRO0003       IRO0004
IRO0008       IRO0009       IRO0010       IRO0011

A>
```

Removing a Patch

When you remove a patch, it is removed from the workstation program. The patch file is not deleted.

If the patch file is on a different diskette or disk, place INDPATCH.COM and INDQPCH.DAT on that diskette or disk. Make the diskette or disk active by typing the drive identifier letter and a colon, for example, B:.

Note: If you do this, make sure the disk drive and path information is present for the module being changed.

If the patch file is in a subdirectory, place INDPATCH.COM and INDQPCH.DAT in the same subdirectory that the APARs are in. Make that subdirectory active with the DOS CHDIR (Change Directory) command. Refer to the *IBM Personal Computer Disk Operating System* manual for further information on this command.

If you have to remove more than one patch, we suggest you remove your patches in the opposite order you installed them.

Note: If you do this, make sure the disk drive and path information is present for the module being changed.

Let's assume you need to remove two APARs that were installed in the following order:

- IR00002
- IR00004

First remove APAR IR00004. At the DOS prompt:

1. Type:
indpatch
2. Press Enter.
3. The following prompt appears:

<C>reate, <I>nstall, <R>emove, or <L>evel :

4. Type

r

5. Press Enter.

6. The next prompt appears:

Type APAR number of patch and press Enter, or
press Enter to Quit

Type the 7-character APAR number and press Enter. This is also
the file name that contains the patch.

Note: If you do this, make sure the disk drive and path informa-
tion is present for the module being changed.

7. The ZAP data line associated with that APAR number appears on
your display screen:

ZAP A:\INDCIPL (OFF=01C4, VER=10CD21C3,
REP=42424242) Verify is correct

8. A final prompt indicates that the patch has been removed:

INDPA027 Patches removed

To remove APAR IR00002, follow steps 1 through 8.

Index

A

APAR

current listing 5-11

definition 5-2

prerequisite 5-3

application program, problem determination 2-56

C

copy services: X'64' 4-59

creating patch file

for a hardfile 5-5

for multi-diskette drives 5-5

for single diskette drive 5-5

how to 5-5

current system level listing 5-11

customization messages

(INDCU) 3-3

CUT hardware initialization:

X'43' 4-48

D

DFT operations: X'30' 4-37

display dump messages

(INDDD) 3-18

display environment messages

(INDEE) 3-20

document distribution file transfer

messages (INDXF) 3-101

DOS subsystem services: X'22' or

X'23' 4-23

draw service: X'67' 4-62

dump diskette preparation

messages (INDDP) 3-22

problem determination 2-40
dump task: X'7F' 4-74

E

enhanced connectivity router:

X'81' 4-75

environment manager services:

X'13' 4-15

error handler: X'72' 4-73

error messages

See messages

error steps

return code 4-77

F

file transfer

document distribution

messages (INDXF) 3-101

messages (INDFT) 3-26

problem determination 2-42

format for patch

pre-APAR 5-3

pre level 5-3

ZAP 5-3

H

host communication problem determination

host communication

indicators 2-21

program error codes 2-27

host interactive services:

X'32' 4-46

I

INDCU customization
 messages 3-3
INDDD display dump
 messages 3-18
INDEE display environment messages 3-20
INDDP dump diskette preparation
 messages 3-22
INDEM keystroke emulation messages 3-25
INDFT file transfer messages 3-26
INDID interchange document profile
 messages 3-37
INDPA patch installation
 messages 3-45
INDPATCH command 5-2
INDSM split/merge messages 3-54
INDSP system/program information file messages 3-60
INDSR save/restore
 messages 3-64
INDST startup messages 3-73
INDSY system error
 messages 3-76
INDTR trace messages 3-86
INDWS work station control messages 3-88
INDEXF document distribution file transfer messages 3-101
installing a patch 5-9
 for a hardfile 5-9
 for multi-diskette drives 5-9
 for single diskette drive 5-9
interchange document profile (IDP)
 messages (INDID) 3-37

K

keyboard
 problem determination 2-48
keyboard services: X'62' 4-52
keystroke definition services:
 X'6E' 4-72
keystroke emulation

messages (INDEM) 3-25
keystroke emulation services:
 X'6E' 4-71

M

merge and split messages
 (INDSM) 3-54
messages 3-2
 customization (INDCU) 3-3
 display dump (INDDD) 3-18
 display environment
 (INDEE) 3-20
 dump diskette preparation
 (INDDP) 3-22
 file transfer (INDFT) 3-26
 interchange document profile
 (INDID) 3-37
 keystroke emulation
 (INDEM) 3-25
 patch installation (INDPA) 3-45
 save/restore (INDSR) 3-64
 split/merge (INDSM) 3-54
 startup (INDST) 3-73
 system error (INDSY) 3-76
 system/program information file
 (INDSP) 3-60
 trace (INDTR) 3-86
 work station control
 (INDWS) 3-88

N

notepad operations: X'51' 4-50

O

OIA services: X'6D' 4-70

P

patch file

- creating 5-5
 - for a hardfile 5-5
 - for multi-diskette drives 5-5
 - for single diskette drive 5-5
- installing 5-9
 - for a hardfile 5-9
 - for multi-diskette drives 5-9
 - for single diskette drive 5-9
- removing 5-12

patch format

- defining
 - pre-APAR 5-3
 - pre level 5-3
 - ZAP 5-3

patches

- installation messages
 - (INDPA) 3-45
- installing 5-9
- list the current system
 - level 5-11
- prerequisite
 - definition 5-3
- problem determination 2-53
- removing 5-12

personal computer application, problem determination

- problem determination 2-56
- presentation space services:
 - X'69' 4-63
- printer
 - problem determination 2-58
- problem determination
 - application program 2-56
 - file transfer 2-42
 - host communication 2-21
 - keyboard 2-48
 - personal computer
 - application 2-56
 - printer 2-58
 - procedures 2-2
 - save/restore 2-61
 - system error 2-62
 - system startup 2-63

- trace 2-66
- work station control 2-67
- workstation program 2-56
- problem messages
 - See messages
- program information file
 - messages(INDSP) 3-60

R

- removing a patch 5-12
- return code error steps 4-77
- return codes 4-2
 - X'Dx through Fx': user system extension 4-76
 - X'12': system services 4-4
 - X'13': environment manager services 4-15
 - X'22' or X'23': DOS Subsystem Services 4-23
 - X'24': DOS system loader 4-31
 - X'25': DOS system loader 4-31
 - X'30': DFT operations 4-37
 - X'32': host interactive services 4-46
 - X'43': CUT hardware initialization 4-48
 - X'51': notepad operations 4-50
 - X'6B': session information services 4-66
 - X'6C': translate services 4-69
 - X'6D': OIA services 4-70
 - X'6E': keystroke emulation services 4-71
 - X'6F': keystroke definition services 4-72
 - X'62': keyboard services 4-52
 - X'63': window management services 4-55
 - X'64': copy services 4-59
 - X'67': draw service 4-62
 - X'69': presentation space services 4-63
 - X'7F': dump task 4-74
 - X'72': error handler 4-73

X'81': enhanced connectivity
router 4-75

S

save/restore
 messages(INDSR) 3-64
 problem determination 2-61

session information services:
 X'6B' 4-66

split/merge messages
 (INDSM) 3-54

startup
 messages (INDST) 3-73
 problem determination 2-63

status messages
 See messages

system error
 messages (INDSY) 3-76
 problem determination 2-62

system information file (SIF)
 messages (INDSP) 3-60

system loader: X'24' or X'25' 4-31

system services: X'12' 4-4

system startup

messages (INDST) 3-73
problem determination 2-63

T

trace
 messages (INDTR) 3-86
 problem determination 2-66

translate services: X'6C' 4-69

U

user system extension: X'Dx
 through Fx' 4-76

W

window management services:
 X'63' 4-55

work station control mode
 messages (INDWS) 3-88
 problem determination 2-67

workstation program
 messages 3-2
 problem determination 2-56

Notes:

Notes:

Notes:

}

}

Notes:



IBM 3270
Workstation

**Reader's Comment
Form**

**3270 Workstation
Problem
Determination
Guide and
Reference**

84X0996

Your comments assist us in improving our products. IBM may use and distribute any of the information you supply in any way it believes appropriate without incurring any obligation whatever. You may, of course, continue to use the information you supply.

For prompt resolution to questions regarding set up, operation, program support, and new program literature, contact the authorized IBM Personal Computer dealer in your area.

Comments:

Fold and Tape

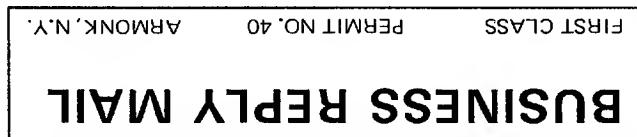
Please Do Not Staple

Fold and Tape



International Business Machines Corporation
Department 95H / 998
11400 Burnet Rd.
Austin, TX 78758

POSTAGE WILL BE PAID BY ADDRESSEE



UNITED STATES
IN THE
IF MAILED
NECESSARY
NO POSTAGE





IBM 3270
Workstation

**Reader's Comment
Form**

**3270 Workstation
Problem
Determination
Guide and
Reference**

84X0996

Your comments assist us in improving our products. IBM may use and distribute any of the information you supply in any way it believes appropriate without incurring any obligation whatever. You may, of course, continue to use the information you supply.

For prompt resolution to questions regarding set up, operation, program support, and new program literature, contact the authorized IBM Personal Computer dealer in your area.

Comments:

Fold and Tape

Please Do Not Staple

Fold and Tape

POSTAGE WILL BE PAID BY ADDRESSEE
International Business Machines Corporation
11400 Burnet Rd / 998
Austin, TX 78758

FIRST CLASS PERMIT NO. 40 ARMONK, N.Y.
BUSINESS REPLY MAIL

UNITED STATES
IN THE
IF MAILED
NECESSARY
NO POSTAGE
REMOVED

